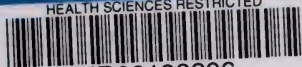


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"Quantam ego quidem video motus morbosi fere omnes a motibus in systemate nervorum ita pendent ut morbi fere omnes quodammodo Nervosi dici queant."—CULLEN'S NOSOLOGY: BOOK II P, 181—EDINBURG ED., 1780.

THE
Alienist and Neurologist

A JOURNAL OF

Scientific, Clinical and Forensic

**NEUROLOGY AND PSYCHOLOGY,
PSYCHIATRY AND NEURIATRY.**

Intended Especially to Subserve the Wants of the
General Practitioner of Medicine.

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INDEX TO VOLUME XXV.

ORIGINAL CONTRIBUTIONS.

A Psychological Incident in the Court Room	351	Morbid Exhibitionism	348
Forensic Aspect of Double Suicide	273	Multiple Neuritis: A Clinical Lecture	137
Heredity: Its Influence for Good or Evil	509	Outlines of Psychiatry in Clinical Lectures	26
Insane Suicide, Insane Homicide, or Murder, Which?	421	Outlines of Psychiatry in Clinical Lectures	199
Limiting the Term "Insanity."	147	Outlines of Psychiatry in Clinical Lectures	292
Medical Science, the Medical Profes- sion, the State and the People	36	Outlines of Psychiatry in Clinical Lectures	437
Mixoscopic Adolescent Survivals in Art, Literature and Pseudo- Ethics	1	The Erratic Erotic Princess Chimay: A Psychological Analysis	359
Mixoscopic Adolescent Survivals in Art, Literature and Pseudo- Ethics	219	The Gentleman Degenerate	62
Mixoscopic Adolescent Survivals in Art, Literature and Pseudo- Ethics	335	The Life and Health of Our Girls in Relation to Their Future	8
Mixoscopic Adolescent Survivals in Art, Literature and Pseudo- Ethics	473	The Louisiana Purchase Exposition, the Neurasthenic and the Brain- Tired	490
		The Quarter and Semi-Decade Treat- ment and Curability of Epilepsia	326

EDITORIALS.

A Blushing Scalp; or, a Cerebral Vaso-Motor Reflex in a Game of Cards	87	Dr. William W. Graves	529
A Great and Unexpected Loss of Life ..	82	Dr. William W. Ireland	92
A Neurologist for the Russian Tsar ..	229	Erotopathy and Morbid Egoism	85
A Physician in the Cabinet	368	Especially Deserving	385
A School of Forensic Medicine in France	377	"Few Men."	92
A Surgeon of Oophorectomic Fame ..	381	Further Gifts to the Harvard Medical School	73
A Texas Mother of Quintuplets	239	Harmful Drugs in Proprietary Medicines	75
Addressing a Doctor as "Doc."	522	Heinrich Heine's Homeopathic Joke ..	535
An American International Congress on Tuberculosis	238	Herbert Spencer	90
An Apoplectic Engineer	379	How the Hair Turns White	73
An Attack of Chorea	240	"How to Live."	231
An Interesting Discussion on Epilepsy	235	Inebriate Bankruptcy	533
An Important Move	81	Injunction Against Dlugasch and Finkelstein	240
Anti-Tuberculosis Awakening	81	Insanity Among Negroes	231
Alum	237	Immaculate Conception in the xvi. Century, and the Wiles of the Matrons Thereof	74
Asylum Promotions	523	Japan's Physicians	535
At Last the Rush Monument	374	Macdonald Recovers \$20,000	383
Bequests of a Reverend Paretic	524	Medical Centenarians	71
Bioplasm as a Tissue Builder	91	Medical Conventions at the World's Fair	91
Brain-Strain or Eye-Strain, Which? ..	378	Medical Press Exhibit at St. Louis ..	89
Correspondence	242	Medico-Legal	535
Crowded Insane Asylum	521	Missouri State Medical Association ..	241
Crystal Springs	90	Old News About the Hypnotic Power of Electricity	236
Death of Dr. E. C. Runge	128	"Oral Hygiene in Public Institutions."	74
Death of Dr. John B. Murphy	230	Parke, Davis and Company's New Manager	92
Death of Dr. McCorn	238	Pathological Exhibit at the St. Louis Fair	385
Died on the Field of Dishonor	373	Penal Fountains of Disease and Vice ..	526
Director Stenson	385	Politics and Public Health	232
Doctor Neils Finsen	88	Progress in Understanding of Alcoholics	234
Dr. A. B. Arnold	381	Remarriages of Wives by Female Sexual Inverts	524
Dr. A. E. MacDonald	530		
Dr. Charles D. Chaddock's Address ..	385		
Dr. Eduardo Maragliano	384		
Dr. Edward Cowles	241		
Dr. E. C. Runge	91		
Dr. Frederick Peterson	241		
Dr. George F. Butler	529		
Dr. George F. Shrady Has Resigned ..	529		
Dr. Hughes' Book and His Friends ..	230		

Saunders' American Year Book.....	91	The Humiliation of Regular Medicine by Government Laws.....	534
Savary Pierce is dead.....	367	The International Congress of Arts and Science.....	369
Senator Coe.....	530	The Legal View of Insanity.....	370
"Short Cuts to Cemeteries.".....	519	The Name of Mount Tabor Sanita- rium.....	530
Some of Our Judges.....	381	The Newer Views of the Pathology of Locomotor Ataxia.....	368
Suicides in the United States.....	380	The New McLean Hospital.....	76
Suicide from Insanity Due to Acci- dent.....	525	The Noise Limit of Cities on the Part of Police.....	376
Tabloid and Soloid.....	385	The Meeting of the American Medi- cal Association.....	240
Tapeworm in the Brain.....	80	The Medical Profession and General Wood.....	87
To Prevent Tuberculosis.....	372	The Passing of Listerine and the Coming of Thymol.....	376
Toxins of Insanity.....	522	The Physician in French Politics.....	520
Tulane Gets a Million.....	377	The Plea of Mysophobia and Other Morbid Fears.....	228
Two Valuable Papers by St. Louis Men.....	372	The Practice of Medicine. A Penn- sylvania Decision on What It Is.....	522
The Abiogenesis Controversy.....	526	The Press Particeps Criminis in Pat- ent Medicine Fraud.....	383
The Acquittal of General Leonard Wood.....	234	The Pressure for Room at the City Insane Asylum.....	535
The American Electro-Therapeutic Association.....	239	The Psychic Sequence of Non-Public Restraint of Children.....	229
The American Cartoonist.....	92	The Psychology of the Decollette Dress.....	87
The American Neurological Associa- tion.....	241	The Pullman Palace Car Company.....	377
The American Medical Society for the Study of Alcohol and Other Nar- cotics.....	530	The Pyromaniac, the Pyrophobic and the Pyrophile.....	83
The American Medico-Psychological Association.....	241	The Return of Kratz.....	85
The American Public Health Associ- ation.....	536	The School of Matrimony.....	229
The Appointment of Prof. Wm. Osler.....	528	The Thanks.....	373
The Birth of Liberty.....	239	The Thirtieth Annual Meeting.....	88
The Censor of This City.....	376	The Trained Nurse.....	92
The Century Magazine.....	240	The Weight of George Francis Train's Brain.....	92
The Crime of Coerced Insomnia.....	532	The World's Fair at St. Louis.....	372
The Daily Medical.....	128	The World's Fair at St. Louis.....	382
The Dangerous Perambulating Para- noiac.....	84	Two New Sanitariums.....	86
The Eye-Strain Theory of the In- ebriety Cure.....	352	William Matthew Warren.....	90
The Fifteenth International Congress of Medicine, Lisbon.....	531	Young's Hotel, Atlantic City.....	240
The Forensic Aspect of Double Sui- cide.....	240		
The Fourth Pan-American Congress.....	536		
The Gates are Open and the World is Coming.....	239		

SELECTIONS.

CLINICAL NEUROLOGY.

- A Fatal Ending of a So-Called Acute
 Circumscribed Edema (Quincke's
 Disease.) 246
 A Micrococcus the Cause of Idiopathic
 Epilepsy..... 116
 A Separate Center for Writing 94
 Abiotrophy 94
 Adrenalin in the treatment of the
 Cardiac Toxemia of Pneumonia... 95
 An Extreme Case of Bradycardia..... 102
 Anxiety Neuroses..... 97
 Amyotrophic Lateral Sclerosis 398
 Arteriosclerosis—Angiosclerosis..... 244
 Auto Agglutination of the Erythro-
 cites 386
 Cavities in the Spinal Cord..... 250
 Cerebral Wound Rivaling the Phineas
 P. Gage Case 99
 Concerning Porencephaly..... 103
 Convulsive Tic with Coprolalia 98
 Cyto-Diagnosis 111
 Degeneracy 550
 Epilepsy 248
 Exophthalmic Goiter 247
 Facts About Cancer 394
 Fracture of the Base of the Skull 555
 Hemorrhagic Encephalitis with Es-
 pecial Reference to Its Tubercu-
 lar Form 118
 Hereditary Aphasia..... 104
 Lucien Lofton's Don'ts in Modern
 Gynecology 388
 Note on an Adductor Reflex of the
 Foot 244
 Nycturia in Cardio-Vascular Affec-
 tions 99
 Metabolism in Pregnancy..... 393
 Mosquitos and Malaria 556
 Organic Disease of the Brain Follow-
 ing Traumata 117
 Pathology of Inebriety..... 247
 Peculiar Disturbance of the Apprecia-
 tion of Time in a Case of General
 Paralysis 119
 "Physiological Economy in Nutri-
 tion." 400
 Postural Albuminuria 392
 Prognosis and Curability of Epilepsy.. 100
 Psychiatry and the Side-Chain The-
 ory 245
 Recent Advances in Neuro-Psychi-
 atry 113
 Relation of Neurotic Cases to Abdom-
 inal Surgery..... 556
 Resistance to Variations in Temper-
 ature and Taking Cold..... 117
 Rise of Blood Pressure in Later Life.. 93
 Stokes-Adams Disease 96
 Suit of an Opera Singer Against a
 Physician 555
 Sugar Formation in Liver Tissue Pre-
 served in Alcohol..... 393
 The Action of Arsenic on the Bone-
 Marrow of Man and Animals..... 119
 The Cause of Epileptic Convulsions... 395
 The Cure of Diabetes 399
 The Early Diagnosis of Arterio-
 sclerosis 396
 The Genesis of Epilepsy 112
 The Heart and the Vasomotor Sys-
 tem 387
 The Musical Equivalent of Epileptic
 Seizures 548
 The "Psychology" of Jane Cake-
 bread 552
 The Pathology of General Paralysis... 248
 The Relation of Fat to Nervous Dis-
 ease 107
 The Remote Effects of Head Injury.. 390
 The Sudden Atrophic Influence of
 Craniospinal Nerves 107
 Traction on the Jaw in Whooping
 Cough 112
 Traumatic Locomotor Ataxia 106
 Traumatic Neuroses 245

CLINICAL PSYCHIATRY.

An Extraordinary Memory.....	415
On the Relation Between Mental States and the Circulation and Respiration.....	121
The Psychology of Occupation.....	264

NEUROPATHOLOGY.

Are Disease Germs Normally Harmless?	561
Case of Pneumococcal Meningitis and Some Records of the Value of the Cytological Examination in Cases of Meningitis.....	263
Post-Mortem Findings in Landry's Paralysis.....	401
Report of a Case of Brain Tumor Involving the Right Lateral Ventricle.....	263
The Brain and Spinal Cord in Hereditary Ataxia	403
The Etiology of Sleeping Sickness	261

NEUROPHYSIOLOGY.

Does Body Make Brain?.....	559
Nerve Regeneration	251
Ramon y Cajal's Morphologic Units Reaffirmed	560
Subcortical Expressive Reflexes.....	561
The Ethics of Eating.....	251
The Influence of Milking Upon the Quantity and Quality of Milk.....	557

NEUROSURGERY.

Anastomosis of the Facial and Accessory Nerves	127
Glycosuria and Diseases of the Ear.....	405
Precaution in Operation for Tris Facial Neuralgia.....	562
Resection of the Cervical Sympathetic	261
Trigeminal Neuralgia Treated by Intraneural Injections of Osmic Acid	404

NEUROTHERAPY.

A Comparison Between the Medical Uses of the X-Rays and the Rays from the Salts of Radium	253
Adrenalin in General Surgery and Neurology.....	124
Alcohol in Surgery	408
Analysis of Gluten Flours	253
Best Methods of Counteracting Psychoses Due to School Strain.....	125
Cordite Chewing. A New Vice Among Soldiers.....	126
Dessicated Thyroid in Paralysis Agitans.....	542
Dormiol as a Hypnotic in Mental Diseases	123
Exclusion of Mentally Defective Immigrants	254
Fatal Iodism	539
Human Improvement and Race Conservation	411
Hydrochloric Acid in Excess	413
Hypodermic Medication in Italy.....	548
Insomnia.....	541
London Sewage	411
Lumbar Puncture in Uremia.....	406
M. Curie's Experiments with Radium Emanations	540
Metal Diseases.....	407
Nerve Suture and Nerve Regeneration	407
New Elixir of Life.....	257
New Hospitals for the Insane.....	413
Phosphorus in Psychasthenia.....	542
Preparatory Course for Nurses' Training Schools	408
Quinin and the Malarial Parasite.....	255
Radiotherapy Dosage	256
Recreation Piers in New York	410
Successful Treatment of Tetanus	254
The Dietetic Treatment of Diabetes.....	537
The Etiology and Pathology of Arteriosclerosis	258
The Intensity of Cholera Amboceptor Formation After Alcoholic Intoxication and Mixed Infections.....	259

The Thenelles "Sleeper."	414	Venesection in Opium Poisoning.....	252
The Treatment of Serious Effusions.....	259	PSYCHOTHERAPY.	
The Washing-Out Plan.....	543	Sin and Dropsy	264
Tinnitus-Aurium	540		

REVIEWS.

A Compend of the Practice of Haemath- therapy.....	134	Saunders' American Year-Book of Medicine and Surgery for 1904.....	266
Are We to Have a United Medical Profession?.....	135	Subjective Sensations of Sight and Sound	267
Battle and Company's Bacteriological Chart	133	Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Hydro- cephalus.....	569
Clouston on Mental Diseases	568	Surgical Anatomy of the Head and Neck	567
Contributors to "The Medical Brief".....	268	The American Journal of Psychology.....	132
Electro-Diagnosis	133	The American Year-Book of Medi- cine and Surgery for 1904	416
Epilepsy and Its Treatment	417	The Doctor's Recreation Series.....	564
How to Attract and Hold an Audi- ence	129	The Journal of Mental Science.....	418
How to Attract and Hold an Audi- ence	268	The Man Who Pleases and the Woman Who Charms.....	265
Iodine and Phosphorus	134	The Medical Book News.....	568
Les Psychoneuroses et Leur Traite- ment Moral	418	The Perverts	129
Medical Books	569	The Physician's Visiting List	134
Pearce on Nervous Diseases	265	"The Story of New Zealand."	132
Pocket Reference Book	569	The Surgical Treatment of Bright's Disease	565
Progressive Medicine.....	131	The Tenth Annual Report	134
Progressive Medicine, Vol. I, March, 1904	418	The Worth of Words	265
Radiotherapy and Phototherapy: Ra- dium and High Frequency Cur- rents.....	566	Transactions of the Congress of Amer- ican Physicians and Surgeons	133



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MIXOSCOPIC ADOLESCENT SURVIVALS
IN ART, LITERATURE AND
PSEUDO-ETHICS.*

By JAS. G. KIERNAN, M. D.,

CHICAGO.

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Neurological Society; Foreign Associate Member of the French
Medico-Psychological Association; Professor of Neurology,
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ROUSSEAU early exhibited what he called short-sightedness, and was treated for this by glasses. His distorted study of medicine led him to give it a sexual excess explanation. While there is very little doubt but conditions mimicking myopia may be produced in this fashion, it is a very open question whether Rousseau's eye conditions were not an expression of his general defect. Excessive masturbation, according to Knies,† very often leads to functional disorders of the eye and hyperaemic states of the conjunctiva. The same is true of sexual excess. Conjunctival hyperaemia, weakness of accommodation, weakness

* Continued from the *Alienist and Neurologist*, Vol. xxiv, No. 4.

† The Eye in General Diseases.

of the interni and the common slight narrowing of the field of vision are very frequent symptoms, while tangible anatomic changes are hardly ever present. The eye obeys, according to Talbot,* the general law that degeneracy may show itself in the minute change, resulting in disturbance of function or in that producing disease, or finally, in atavism. The defects of the eyes requiring glasses are exceedingly frequent in degenerates and often aggravate their morbidity. Certain of the headaches, Rousseau pictures, were clearly of eye-strain origin. This eye-strain, however, does not in any degree support the wild claims made for its aetiologic influence in parietic dementia and in conditions occurring in the hereditarily defective. "Reflex" doctrinaires have shown exceedingly charlatanish tendencies, and in these few have surpassed the eye-strain magnifiers of their office. A Philadelphia ophthalmologist, a self-constituted censor of the profession, has, according to the *Medical News*, lately made a "desperate attempt to attract attention to an over-ridden theory by affecting to show that Darwin, Huxley, Carlyle, Wagner and some other celebrities† were the victims all their lives to their having neglected to correct an alleged eye-strain. Judging from these Biographic Clinics all physiologists, neurologists and clinicians have been in error in considering man anything but an appendix to his eyes." Even æsthetic and scientific deficiencies, according to this ophthalmologist, are due to eye-strain.

Carlyle's interest, Garnett‡ remarks, "in science as in poetry, was solely ethical. If he could connect a scientific discovery or hypothesis with what he deemed a truth in religion or morals, he was delighted; if like the Darwinian theory, it came in company with an unwelcome conclusion he was disgusted, but he admits his indifference to even such a hero of research as Faraday, if his discoveries had no visible influence on human conduct or welfare. It was the same with art: cathedral architecture impressed

* Degeneracy: Its Signs, Causes and Effects.

† Biographic Clinics.

‡ Great Writers: Carlyle.

him as the incarnation of religious feeling, but his taste in painting was that of any Annandale peasant." This opinion, as to the origin of Carlyle deficiencies from his environment and race characteristics (which as I showed over half a decade ago* was exceedingly probable), is scouted by the ophthalmologist, who charges it up to the account of Froude's crimes as a biographer. This error casts a significant light on the value of "Biographic Clinics" from the standpoint of bibliography.

Rousseau early exhibited the mentality of the bourgeois revolutionist who desires to level to his own place, but no further. In this particular the political economy and sociology of Rousseau bear a very close resemblance to those of the modern plutocracy, shop-keeping population and rural middle class. While Rousseau shows undeniable traces of the influence of Locke and Hobbes, he continually repudiates his indebtedness. The French revolutionists were much deeper students of the literature of the English Puritan revolutionists of 1640 than is usually suspected. Just after the deposition of Louis XVI, there appeared a French translation of the trial of Charles I. It was unfortunate, however, that Rousseau accepted the conception of state domination from the Roman law, rather than the doctrine of individual right, which is a dominant part of the English common law. His "Social Contract" is essentially the conception of Hobbes' Leviathan. While Rousseau, in his Social Contract, is at the outset an evolutionist, he becomes a revolutionist, who has no definite knowledge of the rights of the individual.

The main positions of Rousseau are, according to Morley,† these: In the state of nature each man lived in entire isolation, and therefore physical inequality was as if it did not exist. After many centuries, accident, in the shape of difference of climate and external natural conditions, enforcing for the sake of subsistence some degree of joint labor, led to an increase of communication among men, to a slight development of the reasoning and reflective fac-

* *Alienist and Neurologist*, 1895,

† John Morley: Rousseau.

ulties, and to a rude and simple sense of mutual obligation as a means of greater comfort in the long run. The first state was good and pure, but the second state was truly perfect. It was destroyed by a fresh succession of chances such as the discovery of the arts of metal working and tillage, which led first to the institution of property and second to the prominence of the natural or physical inequalities, which now begin to tell with deadly effectiveness. These inequalities gradually become summed up in the great distinction between rich and poor; and this distinction was finally embodied in the constitution of a civil society, expressly adapted to consecrate the usurpation of the rich and to make the inequality of condition between them and the poor eternal.

It has been remarked that the constitution of the United States and the Declaration of Independence owe their origin to the Social Contract of Rousseau. This assertion betrays a curious ignorance of the relationships between the American doctrines and those of the Whigs of England, to whom Rousseau owed his inspiration. Locke, remarks Graham, "seems to have influenced most of all the Genevese philosopher. The calm views of the Treatise on Government find their bold, if not logical conclusions, in the impassioned reasoning of the Social Contract. His opinion that there exists a pact between the prince and the people, the breach of which engagement on the part of the prince justifies rebellion, became the orthodox Whig creed, and was formally accepted by Parliament when it declared that James II had tried to subvert the constitution by breaking the original contract. The doctrine of passive obedience in England was shaken by the Revolution which deposed a king. The doctrine of 'divine right' was shaken by the Hanoverian succession, which changed a dynasty, while the staunch supporters of non-resistance were only found amongst High Churchmen like Bishops Kettlewell and Kenn, who called it devoutly the doctrine of the Cross. But in France no events had yet occurred to destroy the old faith; the same dynasty continued associated with all that was greatest in the

country's history and the faults and vices of the kings no more affected it in the minds of many, than the vices of the popes affected the infallibility of the Papacy. The Gallican Church was keenly monarchical, and the clergy were still in harmony with the opinion of Bossuet, who preached that kings were sacred things, and that even if the rulers were as wolves, the Christians should be as sheep. It remained for Rousseau to change the sedate arguments of publicists into a revolutionary explosive and to apply doctrines which had been innocuous in England to deadly effect in France. It is remarkable that the opinions which proved most destructive across the Channel were imported from this country, where they were harmless. The free-thinking of Chubb, Toland and Tindall, which only met with hot argument from the clergy and cool indifference from the laity, when adopted by men like Voltaire, helped to sap the faith of society and the institutions of the French people. The political opinions of Locke and Sydney, which had only served quietly to depose a king when adopted by men like Rousseau, went to overturn ruthlessly the whole constitution of France."

As has been pointed out by Macaulay, however, revolutions in the English speaking countries are preservative, rather than destructive, since despite all retrogressive influences the revolution has proceeded along the lines of the English common law, recognizing that the rights of one individual extend as far as the right of another begins, and no further. Had Charles I and James II succeeded, the revolutions in England would have been as radical as those of France. As already pointed out, however, Rousseau fell in with the general current of thought sweeping over France. Here, as elsewhere, his genius, was a resultant rather than a determining force.

The germ of the "Social Contract" was an essay written in response to the prize topic offered in 1749, by the Academy of Dijon: Has the progress of the arts and sciences helped to corrupt or purify morals? Rousseau's description of how this topic affected him illustrates that bourgeois type of mind which aligns the bourgeois with the atavis-

tic minds found in the criminal lunatic and savage. In all these, the senile tendency to believe in human degeneracy is marked. "All at once," remarks Rousseau, "I saw another world and became another man. In an instance I felt my head dazzled by a thousand lights, crowds of new ideas presented themselves at once with a force and confusion which threw me into inexpressible agitation. I felt my head seized with a giddiness like intoxication, a violent palpitation oppressed me. Unable to breathe walking, I lay down under one of the trees in the avenue and passed half an hour in such agitation that on rising, I saw all the front of my waistcoat moist with my tears, which I had unconsciously shed upon it." The excitement thus produced by a trite topic, fitting in with the ideas of Adamic innocence which Rousseau had imbibed from both his Calvinistic and his Catholic training, illustrates how great was the emotional instability existent in him at an early period. The controversy between Rousseau and Diderot, as to which originated Rousseau's method of treating the topic, seems futile when this is remembered. It is very probable, however, that Diderot's suggestion of a paradox gave Rousseau's style more verve than it would originally have had. Rousseau, however, was guided by the same bourgeois trend of mind in his treatment of the topic, as he was in so many other directions. Moreover, as his *Confessions* show, he entertained a spite against the Paris Academy of Science for the treatment of his essay on music, to which reference has already been made. In an egocentric mind like that of Rousseau, this would tend to depreciate science and to show that it was degenerating. Like all mixoscopists, Rousseau declined to see the evil in the past in order to enjoy from a fancied contrast, the peculiar coarseness of the present. Graham supposes with considerable plausibility that both stories as to the origin of the essay were one-sided, and that both friends were of opinion that to argue the paradoxical theory was the best course—Rousseau from sentiment, Diderot from ingenuity. Rousseau here found an outlet for his pent up social animosities; an obscure writer, he could speak bitterly of those whose names were

on every lip; an unscientific man, he could scorn those whose systems of philosophy were filling the world with interest and whose theories gave occasion for endless debate; poor, he scoffed at wealth and its luxury; unpolished, he mocked at the insincerity and affectation of fashionable life; inexperienced and slow of wit, he rebuked the pertness and nimble talk of refined society. He has measured the literary value of his essay when he says that, though full of heat and force, it is devoid of logic and order, and that of all writings, it is the feeblest in reason and poorest in harmony, "for the art of writing is not learnt at once." Indeed, the side it adopts is that which a clever youth in a debating society would take to show his ingenuity, and then vote against in order to show his good sense. But what invests the Discourse with interest is the fact that it contains the germ of the doctrine of all his after writings, and reveals the whole character of the man with all his violence against hereditary customs and social distinctions and restraints. The essay illustrates how much the platitude sways the bourgeois mind, even in an revolutionary.

(To be continued.)

THE LIFE AND HEALTH OF OUR GIRLS IN RELATION TO THEIR FUTURE.*

By JAMES H. MCBRIDE, M. D.,

LOS ANGELES, CAL.

THE first need of life is a good physique. Whether one's work is in the field, or the college, or the home, health, vigor, and endurance determine the amount and quality of it. Whatever a few sickly geniuses may have accomplished, the average man or woman needs the physical capital of a sound body.

Though the world's work is increasingly mental work, the tests of efficiency being more and more mental tests, there was never a time when physical robustness counted for more than at the present day.

The mind has had exclusive attention in systems of education. They have dwelt with nothing but the intellect. We are now beginning to recognize the importance of the body in the intellectual scheme, and of the brain in relation to the body, and of the mind as the supreme function of the body.

Life is a conflict, and its vigor, harmony and achievement come of this. Agencies within the body and without are working against survival and tend to lessen life or destroy it. If the defenses of the body against disease were abandoned for a day, we should die. Our destruction would also be certain, though slower, if the higher contests of life were abated. Conflict is the price of existence. Life of the right sort consists in doing things, in overcoming

*Read before the American Academy of Medicine, Washington, D. C., May 11, 1903.

ing. This requires robust qualities of mind and body, and these express the energy that days and years have developed and compacted into structure. From childhood to maturity we are determining the quality of health and character. At every stage of life we are what our past has made us.

The brain is the organ of thought, but the entire body is concerned in the mental functions. This is so because at every step in the evolution of the organism from lower life, with every addition to the nervous mechanism, there were corresponding new connections of brain and body in ever increasing complexity. All ages of life have gone to this. All relations, all experiences, all conflicts, tragedies, triumphs, and failures, all survivals of individuals and of function went to the making of these relations that life exhibits.

The inter-dependence of brain and body is a primary fact of life, and a common-place of physiological psychology. The solidarity of the organism is shown in the relation between the size of the heart and brain. It is not probable that any part of the body functionates without influencing the brain. If a limb is amputated in early life, the nerve cells of the center controlling it will not develop well. If the muscles of one arm are developed by exercise, the other arm grows stronger. If one hand gains in skill by special exercise, the other gains in a regular and measurable proportion. Mosso has shown that during mental effort blood leaves the extremities and flows toward the brain. We seem to think to our finger ends.

The one thing more than any other that has dominated man's life and made him what he is, is action. The results of action were woven into the fabric of man's brain by the experiences of countless generations of ancestors. In the primitive man, thought always expressed action; it was out of the necessities of action that thought came into existence. Our thinking has in it a muscular or motor element. It recapitulates those primitive motor co-ordinations that were in the making of it.

It is not difficult to see that the athlete's actions are

the expressions of his thoughts. The connection is familiar. It is a like truth and a larger one that all thinking, even the reasoning of the philosopher, has in it a subconscious rehearsal of old motor associations, through which thought came into existence; ancestors laid the foundation in their motor thinking for all the fine reasoning of their wise and spectacled descendant. In the primitive man the motor relationships of thought were simpler; in the more highly developed, height upon height has been reared for more complex reasoning, and yet the motor element is still there, though it is veiled and takes place in invisible physiologic pantomime. Stanley Hull says, "We think in terms of muscular action." With all mental processes there is this motor filiation, and as thought succeeds thought a thousand actions of the body are gone through with in physiologic short-hand.

An educational system should have two main objects: First, to make a sound and healthy body; second, the formation of character through mental and moral discipline. As all character comes of moral experiment, so the efficient body comes of experiment in doing things, in all possible discipline that gives the body strength, symmetry, poise.

The Greeks were wiser than we. They saw that the proper foundation for mental training was training of the body. In our system of education we have heretofore worked at the top and neglected the foundation. In our strenuous preoccupation with the mind we have forgotten the body.

Dr. D. A. Sargent, of Harvard, says concerning the neglect of physical training in our public schools: "There is not a single exercise in the school curriculum that requires them to lift their hands above their heads, or to use their hands and fingers, except to turn a page or thumb a piece of chalk." Again he says: "Under such conditions, with no attempt made at classification according to physical needs, with everyone doing the same thing, without any moral enthusiasm on the part of the teacher, without hope of approval or reward on the part of the pupil, without even the inspiring strains of music to relieve the monotony,

our public-school children are put through what some persons call educational gymnastics.*"

There are evidences of an awakening interest in this country in the physical side of child life. Gymnasiums are now in use in the public schools in a number of our cities, though relatively the number is small. It is a most gratifying sign also that our colleges and universities have gymnasiums with skilled directors, and, in the colleges for young women, special attention is now directed to the physical development of the students.

The proportion of young people who go to colleges and universities is, however, a mere fraction. The vast majority of our young people never even go to a high school, nor is anything whatever done with a view to physical development. We leave their bodies to the caprices of natural activity and the chances of occupation. Much of those old constructive forces that belonged to the virile life of primitive man, forces that were packed into every fibre by ages of harsh experience, that were majestic in their power and still potential in every child as a splendid physical capital, are not utilized by our methods.

In regard to the life of young women, we are liable to be misled into thinking that more of them have an interest in outdoor life and sports than is the case. The young women who play golf and tennis are relatively conspicuous, and when we see them we congratulate ourselves and are inclined to brag a little because of the growing fondness of young women for out-door life. We forget their obscure sisters, the great majority of girls and young women who rarely or never play tennis or basket-ball or golf. Those who engage in these or any out-door sports are a mere fraction of the total number. Unfortunately these latter, in common with the others, almost universally wear the conventional style of dress, that is, they compress their bodies with unyielding garments, and they will, of course, have the usual proportion of weak muscles and displaced organs.

Physicians alone know how much misery is caused by the unhygienic dress of women. That all protests have in

*American Physical Educational Review, March 1900.

the past been fruitless might easily have been foreseen. It took epidemics that killed their thousands, not sermons on hygiene, to make men establish quarantine. Health regulations have rarely been adopted because of instruction in hygiene,—they have been enforced by the necessity of self-protection. The promise of better health for women from proper dress is quite vague. The classes who illustrate the advantages of it are not models of form and gracefulness, while the appeal of fashion and the desire to conform and please come of a normal and wholesome instinct. It is not probable that women will be greatly influenced in their dress by any appeals made on the ground of health or comfort. Hygienic dress for women will come as they discover that in their new competition with men, just now beginning, they will fall short of the best possible success to the degree that they lack the staying qualities that men have. They will then adopt hygienic dress from necessity.

The worst feature of women's dress is the corset. The following is a hint of what it means in the life of women: In an Eastern college* for young women there were 35 in the graduating class. Of these, 19 dressed after hygienic models and wore no corsets; 16 dressed in the usual style. Eighteen of the class took honors, of these 13 wore no corsets. Of the seven who were chosen for Commencement parts, six wore no corsets. Of those who carried off prizes for essays during the year, none wore corsets. Of five chosen for class day orators, four wore no corsets. Query: If the wearing of a single style of dress will make this difference in the lives of young women, and that, too, in their most vigorous and resistive period, how much difference will a score of unhealthy habits make, if persisted in for a lifetime?

The vital capital of a generation depends primarily upon what the parents transmit. A sound constitution may be wrecked by abuse and the offspring be thereby affected unfavorably. The bodily vigor of the parent, which is largely under individual control, influences offspring quite

*Dr. Lucy M. Hall, in *Outlook*.

as much as the inborn parental qualities that are inheritable. The first demand of parenthood is health. A strong and robust body may battle successfully against a bad heredity. If men and women would live as they ought to live for a few generations, half the morbid heredity would be eliminated. This is a capital fact in the possible improvement of the race. The effort of society should be to make men and women of this day physically sound, and ultimately make the race so. Heredity, which is the most important single factor of life, would then always work toward racial betterment. As it is now, if all disease and crime were swept away, mankind is living so badly that the crop of the diseased and criminal would soon be large again. The inheritance of both health and disease has generally had obscure beginnings and far-off relationships. The insanity of today is in its genesis largely an affair of the previous generation and others farther back. Influences that weakened the vital resistances of ancestors sent into the world unstable brains that were unequal to the adverse conditions of life. The heredity of each one is complex and infinite. Ages upon ages of human experience, with their strength and their weakness, are packed into our bodies. They act and think and speak in us. We are children of thousands of ancestors whose multiplied lives reach back across the centuries. In the deeper, physiological sense the race inheritance is the larger.

The common impression that play develops the body sufficiently is an error. Play is the natural language of the growing body, and is vitally important to children. It has the advantage of furnishing the greatest amount of exercise with the least expenditure of mental effort. It appeals especially to the automatisms, and so while it exercises, it diverts and rests. Play, however, does not supply all the training that is demanded. Neither does work. Work is excellent, not alone because it does in some measure promote development, but because it has in it a moral discipline. It cannot supply alone a certain kind of discipline that is needed. The gymnasium of the garden and field has helped to give robustness to generations, but

it develops the body unequally. Neither does it supply the finer and more accurate muscular adjustments, with the associated mental drill that special training supplies. Life demands this special training more and more as social organization increases in complexity, both in its intellectual and industrial relations. There is no more profitable drill than that which is obtained in this way. Attention, alertness, interest, courage, quickness of decision, the larger forces of character are here being made in the individual as by a ruder training they were made in the race.

Awkwardness, lack of skill in doing things is waste. Accuracy, ease, gracefulness are economies. Special training of the body brings the power of self-control in action—an important matter in character making. To do things speedily and accurately, to do them in one way and that the best, this is self-control of a high order. Self-control does not consist in keeping still. It consists in that wise self-direction that men of action show, and that makes their lives significant.

No girl should be allowed to grow up without special physical training. This should be supplied when the body is growing and the physiological habits are being established. If the body is not made strong and is not well developed before 20, it will not be after that time. The size of the muscles is determined during the growing period, as is the skill in using them. Special exercise, in later life may develop temporarily neglected muscles, but as soon as the exercises are abandoned they will return to their former size. If they are well developed during the growing period, the larger size is a permanency, and the vigor that goes with this means not only physical capital, but a mental resource.

There is no more important fact relative to the life work than that all activities of the body tend to develop the brain and the mental power as well. Child play and games, the romp and frolic of boys and girls, and all games of skill involve those primary coördinations that are racial in origin, and that are a preparation for the higher and more complex coördinations of later life. Every game well

learned, every kind of work involving skill that is well mastered, means new brain structure brought into activity that serves as a foundation for mental acquisition later. Every game that a boy learns makes a smarter boy of him if he utilizes the skill for the best purposes. Girls need not play all the games that boys do, but there is no reason why they should not be as robust as boys, and no reason why they should not have the physical training that makes strong bodies.

I am now directing the physical training of a little girl of 12. She is most active and has never been seriously ill. Her tastes are for out-door life, and they have been encouraged. She climbs trees, runs over the hills, hunts flowers and insects, studies birds and loves nature. She is thoroughly healthy in mind and body. When I examined her at 11 years of age, I found that her trunk and arm muscles were mere bands. They were certainly a poor report of her activities. She is now taking systematic training. She does not inherit large muscles, and there will be no attempt to make an athlete of her. To do this would be to rob other parts of the body. What she needs is compactness and solidity with moderate size and a certain skillfulness. Her life history will be practically determined by what is done with her body during the next five years. One could easily write a prescription for early invalidism in this child, and have it filled in thousands of homes of the land. Have her wear the conventional dress, crowd her in school and college and neglect her physical development, and at twenty we have the tragedy.

The physical development of girls is not so simple a matter as that of boys, for the girl's body is more complex and the development period has more risk in it. An inactive life is quite as bad for the girl as for the boy, and over-study or stress of any kind is more serious in its consequences for the growing girl. Girls learn quite as fast as boys, or even faster, and the effects of over-study are often not apparent until after they have left school. The phrase "over-study" is often mis-used. If adults and children work under proper conditions they rarely are injured by

any amount of mental labor. If men who work with their brains and students who apply their minds intensely would take proper rest, food and exercise, there would be no danger of over-working. When people thus engaged break down in health they should charge their failure to a neglect of the essentials of healthy living. Many young women injure their health in school not because they study too hard, but because they fail to observe a few simple laws of health that could be summarized in a page.

A girl of twelve coming under my observation studied hard at school and became morbidly anxious about her studies. She slept little, had almost constant headache, no appetite, was bloodless, emaciated and poorly developed. She was ordered from school for three months, and was required to play out-door games and take much exercise. When school was resumed, her exercise and general hygiene were carefully directed. In six months she was strong and without an ailment, and now, four years afterwards, she is in perfect health, though she has not missed a day from school. The result showed that she had not studied too hard, but that her physical development had been neglected.

The student girl should take active out-door exercise every day, under proper conditions of dress. Girls are liable to over-do at out-door exercise and at gymnastics. This is especially liable to be the case with those who need exercise most. Intelligent direction is necessary for most of them. Mothers who are fearful their daughters will break down from over-study need have no fears if the young women care for their physical life. Systematic and persistent exercise out doors will usually insure good health for girls and young women who are studying. A few weeks or months of out-door life or of active training is not sufficient. This would be a parody on what should be a life habit, as much as eating and sleeping. Plato provided that two years out of the three from seventeen to twenty—certainly, the best years for study—should be entirely devoted to the gymnasium.

Plato had limitations in his experience, for he had never

ridden on a fast train, nor talked from New York to San Francisco, nor searched for God's stars through modern smoke, but he knew the secret of health and the real source of man's power. He looked to the triumph of life, not to the petty victory of examination day.

We often hear it said that woman's organization is more delicate than man's, but this delicacy is partly if not wholly the work of civilization. Centuries of repression and hindrance, of hobbling and swaddling have gone to the making of her physical frailty, what there is of it. We admire the frail type of beauty with its appealing suggestions of dependence. The Amazonian mother whose hardy progeny will be the captains of the next generation draws no eye. Considering that civilization tends to refine away feminine vigor, and that there are yet many women who are physically strong, shows what miracles nature can work, and it certainly is a prophesy for racial betterment. In the wild state woman shows no serious physical frailty. She carries the burdens of the tribe, and her fiber is as tough as that of man. We need have no fear of the fate of the race if the living are kept healthy. Here as elsewhere, quality is more important than quantity. Through the law of the survival of the fittest, there comes ultimately the survival of the best. In nature's large economy, it is surely true that the race that becomes extinct deserves its fate.

The building of a strong body with the establishment of good health means to achieve that which runs through all normal life, good physiological habit. All life is in last analysis, habit; there are not only habits of mind, but habits of body, over which we have but indirect control. The functional life of any organ tends to repeat itself, and this repetition is habit. If by a wise way of living one has established the best possible functional life in the organs, this becomes the standard for the body and the energies are on a level with the physiologic habits that have thus been formed.

Doctors know how easy it is to set up morbid, grumbling habits in some organ or organs, that may continue for years or even a lifetime. Every part of the body has a

certain capacity to resist disease or unfavorable conditions, and if this resistance is once broken down by some neglect or disorder of any particular organ, the vital capacity of that part is ever after of an imperfect kind. Half our work as doctors is in treating disorders that are the result of some part of the system having been injured by sickness or neglect, and which ever after is an invalid organ, drawing a heavy pension from the system for its disability.

The systematic physical activity and the good personal hygiene in early life that go to make one strong have also the advantage that these practices become life habits that cannot be broken without discomfort. The desire for healthy exercise becomes a kind of hunger of the body that must be satisfied.

There are very many people who from lack of good physical development live always on a lower plane than would otherwise have been the case. They are not sick,—they are simply less alive than they ought to be. Their physical development was never properly completed, and the functions of the body have never realized their full capacity.

All the achievement of men and women is based largely upon capacity for sustained exertion. To be capable of this, one needs a body that from proper drill in the formative period of life has the habit of energetic and swift response to demands. A poorly developed body means less work and an inferior quality of work, less courage, less persistence. It means in some cases, to put among the common places a career that with robust health might have risen to great achievement.

Boys are better developed than girls because they lead more active lives than girls. There is no reason why a boy should be physically more active than a girl. There is no reason why the man should be better developed physically than the woman. Our methods should produce the best possible development of both.

The animal enjoyment a boy finds after a day in school in wild, rough play puts fresh life into him and new thoughts into his head; while the girl, early impressed with a sense of the importance of decorum and with the ghost

of propriety ever before her, goes home quietly, and the studies of the day still recurring in the tired brain like an echo, her mind is occupied by them in spite of herself. Study pursued under such circumstances may be ruinously harmful, when the same amount might do little or no harm, if done with proper regard to the necessity for exercise and diversion.

There is very much in the life of young women of the present time that tends to arrest the development and result in the lowering of the life capacity. They get through girlhood successfully, but the stress of married life or independent employment is too much for their frail bodies and they become invalids or semi-invalids, capable of enduring little, doing little or enjoying little, and spend their lives on the border land of the physically necessitous.

The girls of the present day, who are brought up under more comfortable conditions than their grandmothers, have gained much, no doubt, in the change of conditions; but they have lost something, in that in many homes there is less of healthy exercise, less of that kind of work that developed the body and also developed simple and healthy tastes. There is, as a result of this, poorer physical development, less feeling of responsibility in the home on the part of the young ladies, and not so great a sense of duty. When every member of the family had every-day, specific duties, work to do that had to be done, work that exercised the body as well as the moral sense in discharging a duty, such life, dreary and harsh as it sometimes was, and often barren of most of those things that we regard as common comforts, had at least the great advantage of providing work that furnished physical exercise, and that was also done under the sense of obligation. There is a moral and physical healthfulness in such a life that goes to the making of strong and simple characters and that puts purity of blood and vigor of constitution into descendants.

Many women, in my experience, break down because, or partly because, they have not a certain kind of training fitting them for the responsibilities of life. No young woman should grow up to a marriageable age without hav-

ing been initiated gradually into the work and responsibilities that belong to a wife and the keeper of a home. A lack of this kind of training is the cause of much nervous invalidism. One who has grown up without proper training in these matters is more liable to have a distaste for such duties than if she had been taught from girlhood to consider them as a matter of course. New and untried duties are always hard, and they are doubly hard if one dislikes them, for a distaste for work involves ruinous friction. The number of young women who soon after marriage break down from the unexpected strain of new duties is very large. The mother of a young woman who had become a nervous invalid within two years after marriage said to me there was no apparent cause for her daughter's illness, as she had been shielded from everything from childhood. This was apparently not because the young lady was delicate, but because an indulgent and unoccupied mother chose to keep her daughter in the condition of a child. The real cause of her trouble was plain enough; she had never known what work or care or responsibility was and the little stress of caring for home made an invalid of her.

One may well ask why any healthy girl should be shielded. What she needs is not shielding but intelligent and sympathetic direction in work that tends to develop a sense of duty and an exercise of judgment. What is a home for to a young woman, if it is not a school that in some measure anticipates by preparation the later and larger discipline which should come to all, a school from which she is graduated into the sober and exigent realities of womanhood?

Why, indeed, should any one be shielded? Were Maria Mitchell and Lucretia Mott shielded? Were our grandmothers, who lived simple and toilsome lives prepared therefor by being shielded? Was it ever the case anywhere that a person who had been shielded grew to be a forceful character or proved a success in presence of the swift and onerous demands of life?

Every girl should at least be prepared for the event-

ualities of married life. Not all women marry, but no woman is a loser who has the training that prepares her for all possible responsibilities of womanhood. Whatever tends to develop in woman all the characteristics of womanhood is an advantage to her. We cannot ignore the fact that there lies in the basis of woman's nature the eternal law of womanhood, and that whatever she may do, whatever station she may fill, she is none the worse but infinitely the better for being a thorough woman.

It is worth remarking that happiness depends more largely upon health than people know. Whatever the causes of unhappiness may be in general, I believe that imperfect health, not that which puts one to bed, but that of low vitality and sluggish function which makes endurance unreliable and the performance of tomorrow uncertain, this kind of imperfect health is chargeable with much of the unhappiness that there is in the world.

With a desire to get the views of educators and physicians on the subject of the life and health of American girls, I recently addressed the following question to 20 physicians, school principals and teachers. "Do you believe that American girls of this generation will be physically stronger than their mothers?"

I have only space to quote the reply of Prof. H. E. Kratz, Superintendent of the Schools of Calumet, Michigan. Professor Kratz is an educator of national reputation, one of those who had the insight to recognize early the primary importance of the physical side of the life of school children. He has made careful investigations on this subject and has written articles of permanent value in regard to child growth and health.

He says: "Your question is one that cannot be answered off-hand, and even then not definitely or positively. There are some things that would indicate that the girls of to-day are not as strong, physically, as their mothers were at their age.

I believe there is a growing tendency on the part of parents in this country to shield their girls from the hardships and severe experiences to which they were exposed.

A mistaken kindness seeks to protect them from all adverse influences. Of course, strong character and strong bodies are not as readily developed under such conditions. I believe there is also an attitude on the part of the boys and girls to demand more from their parents, taking it as their right to escape these severer experiences of life which go to make up strong men and women. There is, therefore, a tendency to hot-house growth, and this will of course neither develop strong bodies or strong minds.

On the other hand, we are waking up more to the need of physical training in the public schools, particularly in the cities. The matter is in its infancy, but the time I believe is not far distant when our high schools and at least upper grade schools will all have well-equipped gymnasiums and more careful attention will be paid to the physical development. Quite a number of the best equipped high schools are already well equipped along these lines, but the great mass of the boys and girls are not yet provided with such physical training as they need.

"As the city population is so rapidly increasing in proportion to the rural, the necessity is growing greater for better provision in the line of physical training, as in the cities the opportunities for physical training and the limited number of duties which can be imposed upon the children are a great handicap.

"The universities, as you rather intimate, are making, as a rule, excellent provision for physical training, but of course the number of girls in universities is small as compared with the large number elsewhere.

"On the whole, I am rather inclined to the opinion that the girls of today are not as strong physically as their mothers."*

*Dr. Mary E. B. Ritter in a paper read before the California State Medical Society in 1903, gave the results of the examination of 660 freshmen girls at the University of the State of California, at Berkeley. Of this number: 176 or 26½ per cent. are subject to headaches; 193 or 29¼ per cent. are habitually constipated; 86 or 13 percent. are subject to indigestion; 3 or ½ per cent. had defined tuberculosis; 7 or 9/10 per cent. had goitre; 57 or 9 per cent. were markedly anemic; 105 or 16 per cent. had abnormal heart sounds; 62 or 9½ per cent. had rapid or irregular pulse; 193 or 29¼ were subject to backaches; 443 or 67 per cent. were subject to menstrual disorders; 10 or 1½ per cent. gave histories of having broken down in grammar or high school, two from "nervous prostration." In contrast to these figures, 149 or 22 6/10 per cent. reported themselves as free from all aches or pains or functional disturbances.

The overwrought and intense manner of many American women is partly due, I suppose, to the contagiousness of custom; but it is also due to jerky and imperfect co-ordination of undeveloped muscles and over-sensitive nerve centers. Well-developed and vigorous nerve centers command the muscles to orderly, smooth and graceful movement, whereas those not so developed leave the muscles to ill-regulated and haphazard action. This is made worse when one falls into the too common American habit of fictitious animation, stilted attitudes of mind and body, and artificial and fussy manners that arouse tense, cramp-like muscular states that are wastefully exhausting, so that gripped hands, scowling features, anxious eyes, irregular movements leak away the energy as fast as it accumulates. Many women seem to think that interest calls for a display of intensity, eagerness and affectation of excitement. They are vastly mistaken. Healthy interest is quiet mannered; it is low voiced; it demands no fuss; it involves no strain.

Our intense and hurried American life which indicates mental tension and unhealthy excitement can be cured by cultivating composure and stopping our high-pressure methods of doing things. The greatest need for healthy human lives is plain, simple, and homely interests. Those who do not have them lack an essential condition of sound character.

The interests of American women are too often mere excitements, and these are always unhealthy. They are unfavorable to quiet and systematic living and lead to selfishness and discontent. I believe much of the poor health of women is due to their habits of excitement. They lose thereby the knack of taking things with composure and self-restraint; the most ordinary occurrences stir up an intensity of feeling and a certain amount of mental tension that are uncalled for and are unhealthy. The woman who is thoroughly healthy lives a frictionless and a fuller life; she is cheerful, she is satisfied with those simple and homely things upon which the most of happiness and the healthier happiness depends. She is more charitable, she has more faith in life and more confidence in human

nature. She does not "endlessly question whether she has done just the right thing." She does not make her consciousness a reception hospital for wounded feelings, and in seeing things in just proportion she distinguishes between the occurrences of moment and the trivial incidents of life.

We Americans, both men and women, have too much self-consciousness; we are over-anxious about appearances and effects; our dash and intensity and eagerness are artificial and wasteful. Healthy mindedness is outwardmindedness; it is forgetful of self in a quiet interest in things to be quietly done. It means that calmness, not excitement, indicates strength; that force of character is not shown by haste, but rather by deliberateness; not how speedy, but how carefully; not how much, but how well.

There is too much eagerness and fussy restlessness in our life. Expression is entirely out of proportion to impression. Though the greater part of life consists in doing something, it does not follow that we should be forever on the run. The work of life is not wholly in action. Self-restraint, calmness, a certain repose have a large share in the enterprise.

In all physiologic processes, there is a certain amount of energy put by as a reserve. If this were not so, every action or every thought would leave us bankrupt of vitality. If we are to have proper self-direction and concentration of effort, there must be structures and centers that are resting, having reserves of unused energy. Through this comes self-direction and restraint of tendencies and impulses. In the healthy and well developed body, unconscious restraints are always being applied in order that irregular action and waste be prevented. Those who fail here wear too much expression in their faces, and are restless and anxious-minded. They scatter their energies in useless muscular tensions and in ill-regulation of thought and action. One often sees in plain country folk a calmness of expression and a quiet manner that is in beautiful and restful contrast to the knit brows and eager manner of the city resident.

To insist upon the completest womanhood is not to demand that every woman should marry. The idea that woman's only function was that of reproduction was primitive; it was a belated survival of the period of the tent and the war club. There are other things for many women besides marriage and maternity.

There is no danger of race extinction; Nature has taken out insurance against that. The problem is not to get more people—it is rather to improve those we have, and leave room also for those who come after us to live better and ampler lives. The cry for more people and dense populations is animal and material. Is not the struggle already hard enough and bitter enough? Do we want more of the necessitous; more mothers weary and worn with grinding toil, more stunted children, more fathers heart-sick and hopeless with the fight of poverty? It will, however, always remain true that the one, best work for most women will be in the home, where as wives and mothers they will have the making of men and the shaping of men's destiny. Though there are other worthy aspirations that woman may have, there are none higher than this. No oratory that she can pronounce, no pictures that she can paint, and no books that she can write, exceed in worth to the world a life like this. By leaving her impress upon her children, she lives again in them and in their descendants, and in them too she carries forward the ideals and perpetuates the great traditions of the race.

OUTLINES OF PSYCHIATRY IN CLINICAL LECTURES.*

BY DR. C. WERNICKE,

Professor in Breslau.†

LECTURE TWENTY-SEVEN.

Chronic and protracted alcoholic delirium. The polyneuritic psychoses.
Presbyophrenia. A case of acute asymbolic allopsychosis.

THAT after awaking from the critical sleep of alcoholic delirium, a paranoiac stage of short duration is often observed, I have already stated. It rarely lasts longer than a few hours, or two days at the most, and is amply characterized by the persistence of the defective orientation and falsification of consciousness, the belief in the reality of the dream-like experiences passed through. Still exceptionally after the sleep a condition corresponding essentially to this paranoiac stage may persist for weeks and months and even longer, cases which have been termed chronic alcoholic delirium.‡ *Chronic alcoholic delirium* is either developed from acute delirium tremens in the way described, or the latter has not occurred in pronounced form, but only repeatedly abortive attacks of the corresponding condition, which are limited to shorter intervals, a few hours and even less. But an initial stage of decidedly longer duration, to which more or less numerous traces of acute delirium are combined, seems never to be wholly wanting in

*Continued from *Alienist and Neurologist*, Vol. xxiv. No. 4.

†English by Dr. W. Alfred McCorn, Supt. Elizabeth General Hospital, Elizabeth, N. J.

‡A few examples from my Clinic have been reported by E. Klefer, Diss. Inaug. Breslau, 1890.

the cases of chronic alcoholic delirium. Besides, the chronic state of these cases presents certain additions, which are to be charged to the alcoholic degeneration. These are the very marked loss of the ability to attend with relatively well retained memory pictures, a thus induced disorientation in respect to the relations of time and the occurrence of confabulations, either that these are communicated spontaneously, or that they seem to be wholly invented by the patient for the completion of noticeable memory defects with respect to the immediate past. That the acute symptoms of false sensations and the motor restlessness and insomnia thus arising are wanting in this chronic delirium, has already been emphasized. Termination of chronic alcoholic delirium in recovery is possible, if the patient's general condition can be improved, and, by continued abstinence, the other signs of cachexia and degeneration. If this favorable result is not attained, then a dementia with progressive impairment of memory and gradual loss of initiative occurs.

Protracted delirium tremens, curable in itself, where the acute symptoms of combined false sensations and the motor restlessness may often continue many weeks, is to be differentiated from chronic delirium. Usually some debilitating factor, as *e. g.* chronic suppuration, tuberculous processes in the bones, chronic pulmonary tuberculosis or cirrhosis of the liver may be ascertained to be the cause of such a protracted course. The other termination of this protracted delirium is often death, as seen from these examples, in consequence of the fundamental exhausting disease. Protracted delirium may form transitions to inanition delirium so-called, but is still to be differentiated from it usually.

Acquaintance with chronic delirium tremens puts us in position to know two other well characterized disease types, without my presenting examples of them. It will be sufficient to remind you of previous demonstrations. You remember Mrs. S., a tailor's wife, 41 years old, I presented some time ago as an example of *polyneuritic psychosis*, who had to be brought in on a bed, because she was unable to

walk owing to an atrophic paralysis of the legs of a polyneuritic nature. Her physical condition was easily ascertained, because she appeared perfectly natural and attentive, and her attention by determination of the range of sensation revealed a normal condition. A combination of the four psychotic symptoms familiar to us was then the more conspicuous. The first was the allopsychical disorientation: the patient had no idea where she was, she believed she was with a former employer in the country as a make-shift, on looking out of the window to recognize the spires of the neighboring city of R., mistook me for the family physician, the accompanying fellow patient for the chambermaid, the assistant physician for the son of her employer; she regarded the present occasion a legal proceeding in which she would be sworn, she fancied she recognized court officials from R., in the audience and a number of her youthful acquaintances. Still she at once correctly recognized all other concrete things and objects. The second symptom was an extremely conspicuous impairment of the ability to attend. The patient at once forgot what she had just said; a number of three units, a foreign sounding word, which she should retain, she had forgotten after the interjection of a short question, and if still further time was let elapse, she had forgotten that such a statement had been made. An ophthalmoscope—an instrument unfamiliar to her—she considered after a short time with the same interest as at first and claimed never to have seen it before. Accordingly she did not know how she had reached the auditorium, that she had been carried up two floors, and she did not know the time of day or whether she had eaten her dinner or not. But she considered it very possible that she had, for she was not hungry. When I asked her what she had done yesterday, she said she would have to think, but then told with all definiteness and detail of an excursion with her employer's family to a brewery and park in a neighboring village. She also told of various events of the preceding days. She definitely remembered of having put the children to bed the evening before. She had been sixteen years with this employer

and gone away occasionally because the gentleman had been dissatisfied with her personnel and she had not been able to help her husband when unoccupied. We here find the third conspicuous symptom, that of confabulation or additive false memory. You remember I referred to the connection of this symptom with memory defects. But the extent of this memory defect was surprising, for it extended far beyond the time of the acute disease and back years. Hence, there was no possible doubt that such an absolute defect existed, and this was the most strikingly shown, when I called the patient's attention to the paralysis of her legs and the contradiction that she claimed to have taken a long walk yesterday. The origin of this paralysis was a complete enigma to her.

As you will remember, I called attention to the fact that such a loss of memory for the time of the disease, *i. e.*, for the duration of the inability to attend, seems readily comprehensible*, but that a so-called retroactive amnesia† was demonstrable in our case. The patient believed she lived in R., as before, while she had moved to Breslau with her husband some years ago. She well remembered her marriage and the friendly relations with her former employer, which she had kept up from R. She also correctly gave all other data of her earlier life. It was easily proven that she had retained as much of her school knowledge as could be expected of people of her station and age. She was incapable of all mental arithmetic, for, in spite of her possession of the multiplication table she always forgot the number, but on paper she could correctly solve examples with numbers of several units.

With respect to the history of the origin of the case, we had learned that the woman appearing ill and almost waxy pale at the time of the presentation, had had frequent uterine hemorrhages for six months. An especially severe hemorrhage four weeks ago had preceded the acute onset of her disease. Previously, a weakness of the legs had gradually appeared, with pains and paresthesia. Of

*See *Allenist and Neurologist*, Vol. XX, p. 542.

†See *Allenist and Neurologist*, Vol. XX, p. 380.

the mental disorder beginning very acutely we have only an imperfect report, according to which paroxysmal delirious conditions, especially at night, also paroxysmal frenzy may have existed. With us, the patient only the first day had an intense motor restlessness (with simultaneous mutism). Then the condition developed, which I could show you and continued almost unchanged for months, but still had gradually resulted in a passable resolution, for the patient could be discharged improved after six months.

With respect to the etiology of the case, we had placed the chief weight on the patient's repeated hemorrhages. Not only the anamnesis and the patient's appearance indicated this, but the blood examination, for we could only find 55% of hæmoglobin (by Gowers' method). But we have later learned from the patient's own statements, that during the last two years she had drank a great deal of Bavarian beer, and recently brandy and whiskey in large amounts.

As you see it is here a matter of form of disease to which certain defect symptoms are added in spite of its acute origin. I mean the loss of the ability to attend and the retroactive amnesia, the severe impairment of memory. Still actual dementia cannot well be spoken of, unless violence is done to this concept. The animated face, the attentive manner, the well retained attention are evidences in this respect. Nevertheless, the existing defect well explains why no trace or perplexity was present, in evident opposition to the marked allopsychical disorientation. Only a paroxysm of anxiety readily comprehensible on the occasion of the clinical presentation may be disclosed by misconception of the situation, as a court room. Likewise, the wholly affectless, apathetic and disinterested conduct of the patient on the ward indicates a certain mental defect.

It only remains to say a few words as to the acute onset of the disease. In our case sufficient data are wanting, and if we judge from our own observations, the typical disease type of a hyperkinetic motility psychoses had preceded. But it seems, according to other experiences with analogous cases, as if very often a sort of dazed condition

with motor restlessness and hallucinations, which most resemble delirium tremens, but without having its typical course, then a delirious stage in the acute disease is present, followed by the more chronic state described of very much longer duration. This always declines gradually. In my opinion, this latter stage in its specific composition is characteristic and decisive for the diagnosis from the definitely comprehensible symptoms described. With respect to the polyneuritic symptoms of the disease, in our case they were very pronounced and had caused a total inability to stand and walk. The paralysis was flaccid, the reflexes absent, the muscles everywhere very sensitive to pressure, the quadriceps and peroneus muscles were especially affected on both sides. In most of the muscles affected reaction of degeneration existed and a marked blunting of the faradic excitability universal. The sensibility was very distinctly affected in the terminal members and the sense of position especially implicated. On discharge, restitution was so far advanced that the patient could stand and walk without support.

The picture of polyneuritis is not always so pronounced as in our case, it is very common that only a diffuse wasting of the muscles, a slight blunting of the faradic excitability and tendon reflexes, a slight sensitiveness to pressure of the muscles and a tendency to spasm exist. Indeed, in other cases the polyneuritis, from whence the name is derived, is wholly wanting in the existing psychosis, a point to which I will return. If for the present we adhere to the disease concept of the polyneuritic psychosis, its prognosis, in case the etiological factor is removed may be said in general to be favorable. The large majority of cases terminate in resolution, if very slowly. Still a part of the cases end fatally in a few weeks. Without doubt this course depends on the kind of etiological factor, and in this respect alcohol seems to take a relatively favorable position. It here seems to behave similarly as in polyneuritis itself, which is the basis of the extremely frequent deleterious disease type of acute ascending or Landry's paralysis. Strange it is that I have never seen these severe cases of

polyneuritis accompanied by polyneuritic psychosis. Besides in the number of cases alcohol takes the first place, then the metallic poisons, lead and arsenic particularly.*

I have repeatedly called attention to the fact that in psychiatry a connection between the clinical type and the etiology is to be recognized only in so far as definite clinical pictures generally follow certain injurious factors, while an exclusive connection of the sort is contradicted by daily experience. So it is with the purely empirical statement given of the disease type of the polyneuritic psychosis. Under this name is comprehended that very diverse pernicious factors are to be considered etiologically, as is known in polyneuritis. But an eclectic proof of the correctness of our position in this question we will leave to perceive in the fact, that exactly the same disease type without polyneuritis is met with, as I have recently stated. This is particularly true of the delirious form. I remember a case of the sort in the wife of a physician, whose child while traveling had fallen out of the car door owing to its being imperfectly fastened, who in her anxiety knew of nothing better to do than jump after it. She sustained a severe head injury and presented after regaining consciousness, the typical picture of the delirious form of the polyneuritic psychosis. It was shown by examination that the four symptoms peculiar to the chronic stage were present at the same time. An analogous case, which I still have under treatment, followed a severe surgical operation, a gastro-enterostomy, which of itself was favorable in its course and is now in the convalescent stage. As in these two cases a combination of psychical influences and somatic interferences caused the outbreak of the disease, a part of the cases differentiated as so-called symptomatic or inanition psychosis present the same clinical picture as the polyneuritic psychosis. But the best evidence for our standpoint is the clinical picture of presbyophrenia almost identical with the polyneuritic psychosis.

Presbyophrenia is the specific mental disease of senility

*Cases of polyneuritic psychoses are Case 17, Heft 1 and Case 9 Heft 2 of the "Krankenvorstellungen."

in the meaning and with the limitation by which we recognize an etiological classification of mental disease, *i. e.* it is met with exclusively in the aged, if it is differentiated from the polyneuritic psychosis, and in many cases no other etiology can be ascertained. Still it represents only an essential portion of the psychoses due to senility. It occurs in two forms like the polyneuritic psychosis, an acute delirious and a chronic. The latter may be regarded incurable after existing for a long time and is composed of the same constituents as the polyneuritic psychosis in the chronic stage above described. You meet with the same symptoms of allopsychical disorientation with perplexity wanting, loss of ability to attend with retained attention, confabulation and retroactive amnesia. But pathological changes in the mental state and especially of two varieties, in that first an euphoria not corresponding to the conditions of the reality, then a choleric mood is added. You remember the two examples I have presented. One was Mrs. H. of 78, who manifested her good health by a certain comfortable loquacity and, because she considered herself a young girl, presented fits of bashfulness which are very comical at her age. The other, Mrs. K. of 84 you will remember as a great reviler, who used the most obscene language and accused those about of the worst abuses. It was evidently a matter of confabulated memories on the basis of misinterpreted events and hypochondriacal sensations that both patients had in common, the facial expression, gestures and utterances which must by their energy strengthen the suspicion of senile dementia. The acute or delirious form of presbyophrenia has essentially the same characteristics as the chronic, perhaps with the exception of retroactive amnesia. But besides a moderate degree of motor restlessness, insomnia and periodical hallucinations, visual especially, exist. On the whole it presents the picture of an essentially mild delirium tremens correspondingly prolonged. I remember a case of the kind in a woman of 76, until then active, in whom the disease terminated so favorably that the patient was able to carry on a very extensive business for many years. The duration of the dis-

ease in the cases which recover, which often happens, is from four to eight weeks. In other cases it passes imperceptibly into the chronic form or simple senile dementia, which is always the terminal stage of the chronic form.

The cases of disease you have become acquainted with have the common characteristic of allopsychical disorientation and therefore deserve the name of acute allopsychosis. Among these acute hallucinosis is rendered prominent by the fact that it is the result of irritation by hallucinations, which in time leads to disorientation, so that the paranoiac stage lets the disorientation stand forth clearly. Whereas, delirium tremens, polyneuritic psychosis and presbyophrenia present allopsychical disorientation from the first as a symptom of defect. With respect to delirium tremens, I refer to my previous remarks. With regard to the polyneuritic psychosis and presbyophrenia, it might be attempted to ascribe to the two diseases, general loss of ability to attend for explanation of the allopsychical disorientation. That this is not permissible is shown, *e. g.*, by a case of postepileptic allopsychosis*) with well retained ability to attend. Besides, it occasionally occurs that the allopsychical disorientation seemed increased to asymbolia. Thus, I could recently present a second time as asymbolia, a patient who had previously shown the ordinary picture of polyneuritic psychosis.* But an independent asymbolic form of acute allopsychosis occurs, if very rarely, as the following case proves. It is the matter of a teacher, N., of 43, who was admitted to the Clinic February 10th, 1887, and discharged recovered after seven weeks (March 29th). The onset of the disease was very acute, following solicitous nursing of a patient, and then the death of his wife affected the patient greatly. He was then wholly disorientated for a few days and, with vivid hallucinations, wandered about the neighboring villages and was brought to the Clinic by his fellow citizens, bound hand and foot. At the Clinic he was somewhat reticent, gave little and un-

*Case 7, of the *Krankenvorstellungen der Psychlater*. Klinik zu Breslau, Heft 2.

*Case 9, *Ibid*.

willing information and evidently mistook the persons and surroundings. This could not only be inferred from his meagre answers, but chiefly from his conduct. While he could evidently see and hear sufficiently, presented no brain symptoms, had perfect control of his movements, the use of the most common objects seemed wholly unknown to him. He put his head into the bowl, tried to put his pants on like a shirt, did not know how to use knife, fork and spoon. He later learned to recognize the bowl and grasp it with his hands. The affect, in which he was constantly, was that of allopyschical perplexity, and continued of moderate intensity, yet it rendered the thorough examination of his mental condition difficult, for it usually caused the patient to be reticent. Still this much may be claimed with certainty, that traces of aphasia have never been observed in him. From his sporadic answers it might be considered that the patient retained comprehension of speech for simple questions. With respect to the motor conduct, the condition corresponded to a moderate degree of motor restlessness, but without the addition of real motor symptoms, at most corresponding to the definition of aimless motor impulses. Patient tumbled about his bed, assumed the strangest positions, constructed a sort of cage from pieces of his mattress, clung to his shirt, stripped it off, twisted the covers together, etc. It was difficult to get him to leave the bed, probably because this place had gradually become familiar to him. A marked, anxious affect was observed only when a change in his position was effected, otherwise only a moderate confused affect or an apathetic mood existed constantly. The patient must be taken up to attend to his bodily requirements, otherwise he soiled himself, evidently from disorientation. Hallucinations could not be wholly excluded, but certainly were not numerous and in no way the cause of his intermittent motor restlessness. On decline of the symptoms described, the patient became convalescent.

(To be continued.)

MEDICAL SCIENCE, THE MEDICAL PROFESSION, THE STATE AND THE PEOPLE.

DR. WILLIAM E. ROGERS MEMORIAL ADDRESS BEFORE
THE FACULTY AND ALUMNI OF MEMPHIS HOSPITAL
MEDICAL COLLEGE, DELIVERED NOVEMBER 18, 1903.

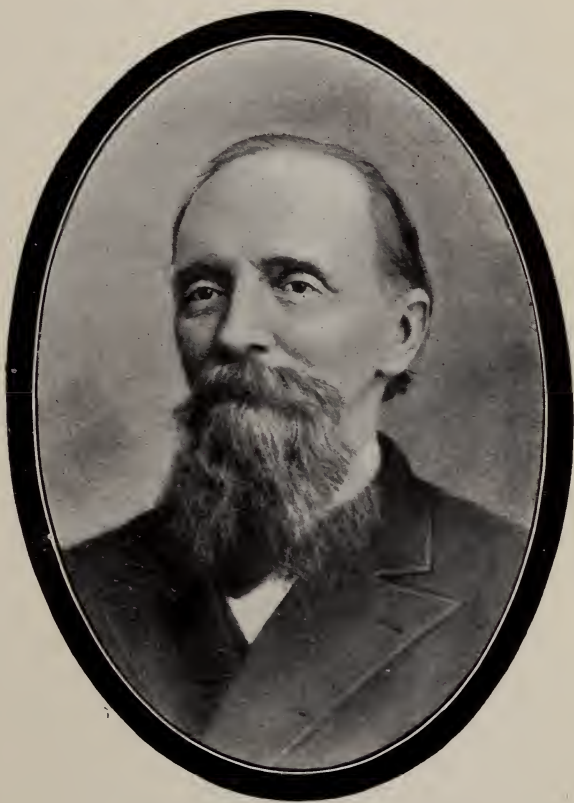
By CHARLES H. HUGHES, M. D.,

ST. LOUIS.

Dean of the Faculty and Professor of Neurology and Psychiatry, Barnes
Medical College, St. Louis.

GENTLEMEN OF THE FACULTY, MEMBERS OF THE CLASS, LADIES AND
GENTLEMEN:

I ESTEEM it an exalted pleasure and honor that I have been selected to deliver the first of the Memorial Lectures in commemoration of the distinguished and esteemed Dr. William E. Rogers, whose name and labors in the line of his profession were so long and worthily identified with the welfare of this good portion of the country. He was also known throughout the South, and his name and fame extended further in his day—as far north as the great lakes, south to the southern gulf and to the eastern and western ocean shores and even beyond the Atlantic. In medical annals and in the popular heart his virtues will be cherished, with the memories of the Paul Eves, Henry Campbells, Joseph Jones, Crawford-Longs, Marion-Sims, Claudius Mastins, Hutson Fords, the Stones, the Cartwrights, the Yandells, the McPheeters, the Dudleys and the McDowells of the Southland; and with the Drakes, the



WM. E. ROGERS, M. D.

Popes,* the Comegys, the Mathews, McMurtrys, Lintons, Hodgens, Frenchs and Stones, not far away from your borders, and Saunders, Erskine, Henning, Simmons, Smythes, Sinclair, Maury, and their colleagues among the older men of this worthy faculty, and with the Mitchells, Thorntons and others of this city.

The great edifice of medicine whose outer portals you have passed and within whose area you have entered and are walking onward, is an unvalled and roofless structure of many apartments and all devoted to science. It is open to the heavens of science, to let in the sunlight and reveal the stars of progress in their courses. It is dedicated to the making of men, high-minded men, patriotic, capable men in one of man's greatest of vocations; such men as should constitute the State in these perilous times of venal public service.

We walk therein, not so much as our fathers did, in the bewildering twilight and shadow of great truths yet to dawn upon the Medical World, but in the full sunlight of many discoveries which have brought us so near, in the light of Nature's revealing mysteries, that we almost walk in science, as the patriarchs did of old, in spirit, with the Great Jehovah. While, as of old, the Heavens declare the glory and the firmament sheweth the hand-work of God, now the once mysterious earth and its atoms, its ions and atmosphere reveal astounding omniscience and omnipotence. Once-hidden things of worth in living and inanimate nature are now brought to light by research of the sciences tributary to our art, have placed us in closer communication and give us clearer perceptions and comprehension of the Great Designer of Cosmos, in relation to the organism and welfare of man. Though we look now from Nature up to Nature's God not so far off as our ancestors did, for the sciences which were but nebulous or non-existent in their day, have made the once umbrageous fields of vision full of light in many places, we no longer see as through a glass darkly as they did. We look from Nature's laws and

* Dr. Charles A. Pope, founder of the St. Louis Medical College, was born in Alabama, and M. L. Linton, of the same school, in Kentucky.

later revelations at this wondrous complicated mechanism of man, and see with an illuminated vision that exalts our wonder, gratitude and powers and increases our responsibilities and duty for better, higher, nobler work for the welfare of our fellows. Gentlemen, you have selected no common calling for your life work.

Chemistry disintegrates matter till its ultimate combining qualities are discovered. These smallest parts of matter which can take part in a chemical change, it has named atoms. The atom is the combining organizing unit of chemistry. The smallest combination of atoms that will form a given compound constitutes the molecule. The smallest particle of matter that can exist separately and yet retain its composition and properties is called, in physics, also, a molecule. The molecule as distinguished from the atom of chemistry is the structural unit of physics.

The sensible changes of matter, as evaporation of water into steam or its solidification into ice, or the liquification of air, all bodily contractions by cold or expansions by heat, wherein the chemical composition is not changed but which, under changed conditions of heat or cold, as in the return of steam by the cold condensation to water or ice, or the change of ice by heat expansion into water again, are molecular arrangement changes, but when water is evolved into its component atomic elements, that is, into one element of oxygen and two of hydrogen gas, the change is atomic.

It has been the belief of chemists, for some time, "that most molecules are possessed of a structure. That they are not single, simple, indivisible, minute, insensible masses but consist, themselves, of aggregations of still smaller particles, held together by the operation of some other force." These particles are the atoms already referred to and the force which holds them together into molecules and compounds is called chemical affinity and chemical attraction.

To the mind of the chemist such molecules are little systems which are attracted to each other by this particular force; in the ordinary movements of the molecules, the sys-

tem moves about as a whole. In this respect it bears some analogy, in an infinitely minute scale, to a solar system. The atoms of a molecule are regarded as in a state of motion as respects one another, possibly revolving about one another, while the entire system or molecule, at the same time performs its independent movements, just as in the solar system the various members perform various movements toward each other while, at the same time, the whole system travels upon its prescribed orbit (Newth).

But since your best text-books were written chemistry carries us still farther into the arcana of Nature and the ion or electron, a component radical of an atom or molecule, a product of electrolytic decomposition, has been added to the nomenclature of those basic sciences of your art, chemistry, biochemistry and electricity, which go along with anatomy, physiology, etc. The anion is the electro negative component of an electrically disintergraded product, brought out at the anodal or positive pole; the kation showing at the negative or cathodal pole in electrolysis.

The discovery of the ion in connection with the discovery of radium has modified the theory of atoms as individual particles of matter, but not as combining elements. Leucippus and Dalton and Avogadro must now step aside while a woman, Madam Curie of France, enters and engages our attention for a moment, along with her husband, whom she leads. "Though she bends him, she obeys him; though she draws him, yet she follows."

The recent wonderful discovery of radium, the tenth part of a grain of which will illumine a room and color its glass windows violet, greater in size than the cubic space of this platform, if enclosed, for an incomputable time, and an ounce of which has been rather extravagantly estimated to possess the thermal motor force of the world's horse power, has made a woman's name immortal and with the generosity of her sex toward man, she takes her chemist husband, Monsieur Curie, to share in her immortal fame. By this discovery of the Curies, elaborated by Professor Oliver Lodge, and others, the ions or electrons are shown to be related to atoms, as our planet earth and its moon

and their neighboring planets and their moons bear relation to the sun and other planetary systems to our sun. Very curious! is it not?

This revolutionary discovery for chemistry and physics is found in pitchblende.

And all this has come about through the discovery of one woman in a chemist's laboratory. Of course Madam Curie could not keep it to herself. She told her husband, her husband told the sexton and the sexton tolled the bell which has tolled the knell of the atomic and molecular conceptions of matter as we have too narrowly regarded them, as representing ultimate divisions of matter.

M. Curie recently showed before the Royal Institute of London that radium spontaneously and continuously disengaged heat in such a rapid stream, the ions rotating so rapidly and violently as to give off a violet light, affecting photographic plates through opaque substances and giving white glass a violet color. This radium radiance and intense activity has revealed chemistry as the anatomy of the infinitesimal. The revelation has changed our conception of gravity and the atomic theory. Radio-active energy is a new form of energy brought to our notice through its wonderful action on water and metals. Dr. Brokaw of St. Louis, after eighteen hours exposure to radium produced perfect photographs, equal to the best X-ray pictures.

These ions or electrons compose and give to atoms their properties, preside over and determine chemical attraction or affinities and the cohesion and aggregation of atoms into molecules and sensibly perceived masses of matter. The secret of chemical affinity is revealed through our knowledge of the ions. It is computed by these wise men that the ions or electrons hold the fluids and gases together and in their distinctive forms, preside over gravitation and guide the planets in their courses and keep them in their orbits; give earth and sun heat, the sun light, the moon its reflecting light, regulate vegetation and animal life and growth, give the human mind perception, emotion, thought and power, and regulate all intelligence. The mad philosopher of Ben Jonson's *Rasselas*, who believed he regulated the

planets and the seasons, never conceived so much in his wildest morbid fancies.

Seven hundred ions are computed to make an atom of hydrogen, eleven thousand ions an atom of oxygen, but radium is divisible into thousands and hundreds of thousands of ions, life giving, death dealing, heat and light engendering, almost beyond our computation and comprehension. Radium rays, like X-rays, are germicidal.*

If an atom be so small, as chemistry proves, that no microscopic lens is powerful enough to discern it, what must we think of these infinitesimal ions, so minute that one hundred thousand of them or more make up each of the invisible atoms, that make up the molecules, that make up the neurones or cells and axones and dendrites of the organs of the wondrous organism whose wonderful movements, normally regulated and balanced in health, and abnormally moved and unbalanced in disease, is to be the ob-

* Besides the heat and light rays of radium, it gives out invisible rays of three kinds that have a similar velocity and force. Professor Crookes has gravely stated that one gram of these emanations could more than lift the British navy out of the sea. Becquerel knew of the lesser radiant energy of uranium and thorium in 1896.

Pitchblende is mostly oxide of uranium. Six years after, 1902, Madam Currie extracted a pure radium chloride from it. It might appropriately have been called Curium, since not only a woman, but a very curious woman, found it, and it promises to be something of a cure-all especially, if the quacks can afford to use it and pay their advertising bills besides.

I have seen Professor Rutherford, of McGill University, impress the electric current by it. I have seen him condense its luminous radiations with liquid air so as to give a beautiful emerald hue to a foreign substance, and I have seen, by means of the Crookes spintharoscope, three-fourths of a gram of radium reflected on and from a sulphide of zinc screen in a dark room, send out radiations, flying like meteors and shooting stars.

Radium will make the aqueous and vitreous humor of the eye self-luminous, even though the lids are closed and thick paper covers them. It will illumine through the lens and retina and reveal cataract or other disease. But the exposure must be very brief, as otherwise blindness may follow, for radium is a destructive agent, destroying to kill or cure, according to the skill with which it is used, like the surgeon's knife or the weapon of the unskilled or reckless quack. It may improve or destroy animal life, arrest or advance organic development. It has been conjectured that not only radium but that uranium and thorium are in the sun. It has also been conjectured that thorium and williamite are products of radium disintegration.

The force of gravity and magnetism are afferent, that of radium is efferent. It has recently been discovered in the ores of Utah which furnish Carnotite, containing an oxide of uranium, vanadium and other oxides. This will likely cheapen the product so as to give it universal therapeutic use.

Thorium, which has sufficient radioactivity to be of therapeutic value similar to radium, is found in Norway, Sweden, Brazil and North Carolina, is marketable at about the price of silver, that is, it is only worth its weight in silver, while pure radium is worth its weight in diamonds of the first water.

ject of your life study. As the skilled engineer and mechanician regulates, repairs and builds the grosser machinery of man's wonderful but less perfect contrivances, you are to regulate and control this wonderful mechanism of man which the great Architect and Builder has designed and fashioned in his image. The light and life of all life and light and heat and color combinations is in these ions, so infinitesimal in size that a hundred thousand of them are computed as necessary to make an invisible atom. This newly discovered force* has given us the new term ionic disintegration. By its means MacKenzie Davidson of London, Gussenbauer of Vienna, have cured epitheliomata. Cancer and blindness have been favorably impressed by it. It has cured lupus and Professor Rutherford, from its result in cutaneous tuberculosis, thinks it ought to destroy pulmonary diseases and eradicate the great white plague from the land.

†The light from one tenth of a grain and four exposures were sufficient to disintegrate and destroy these morbid growths. Under this brief treatment the skin would slough as from a powerful X-ray. Like musk, valerianate of ammonia, the scent of flowers and other odorous substances, radium loses no appreciable weight during these violent luminous radiations. The germicidal therapeutics of strong white light have entered a new phase since the coming of the Roentgen, the Finsen and the radium ray, and you will utilize them in your practice.

Radium is now harnessed to the flying chariot of medical progress and like the X-ray, the N-ray and the

* The newly discovered element, radium, according to Dr. David T. Day of the Department of Mines and Metallurgy at the St. Louis World's Fair, will be exhibited as one of the treasures of his department.

A small piece of the costly metal, less than a grain, has been secured from Doctor Curie of Paris, its discoverer, and will be brought there next year. The exhibit will be made by a private exhibitor, who secured the specimen at a great cost especially for the World's Fair. Dr. A. V. L. Brokaw, of St. Louis, and one of your own citizens have also working samples.

† Radium is destined to take a prominent part in the great awakening for the extermination of phthisis pulmonalis, which has now extended beyond the limits of the medical profession, out among the people, who are now organizing for its eradication, as, in the Visiting Nurses' Association, of Chicago, projected open-air municipally planned sanatoria and the St. Louis World's Fair movement for a world's medico-legal and popular congress on the subject.

Finsen light, it is henceforth to be at your service, with the other great agencies of our therapy, for the amelioration and eradication of disease and the hygienic welfare of man. You are to include them in your studies and to learn if you can to what extent they may be capable of changing vicious constitutional states and altering neurone activities and effecting blood changes for good or ill to the afflicted.

Strange and marvelous is it not that this wondrous agent with its marvellous power and properties should be obtained from uranite or pitchblende or oxide of uranium?

It is for you to determine whether this newly discovered, marvellous energy of radium is an emanation or a reflection from some other source in Nature. Edison has hinted at the latter. He thinks this wondrous force is "rendered fluorescent from some hitherto unnoticed ether vibration, just as the Roentgen ray and the Herizian wave remained undreamed of for centuries after the phenomena of sound and light and heat were well understood, so it is not only possible but extremely probable," he thinks, "that there are other rays in the immense gamut from sound to ultra violet, not yet discovered." In his experiments he says that he has found that "the ordinary electric arc, when raised to an extremely high temperature, gives off a ray which renders the oxalate of lithium highly fluorescent. In the same way the Roentgen ray renders platinum-baryum-cyanide, tungstate of calcium and cuprocyanide of potassium highly fluorescent."

The X-ray develops in these substances a condition of activity which results in the emission of actinic rays with a little heat. He says: "The actinic rays, as you will find from your study of physics, are those rays of the spectrum that are most potent in producing chemic changes, viz: the blue, violet and ultra violet. But radiant energy may effect its chemical changes without light, as radiating heat and the X-ray."*

*Sajou's Cyclopedla thus abstracts E. S. London's article on this interesting subject in *Klin. Woch.*, June 3, 1903.

If a piece of sealing wax is actively rubbed with flannel, it will, as is well known, attract to itself from a short distance small pieces of paper. If, now, after the sealing wax

We see the effect of radiant energy every day about us in the fading of fabrics, as carpets in parlors, which our mothers, wives and sisters so unwisely, because unhealthily, darken, and in the tanning and freckling of the skin, for which they more prudently wear gloves and veils.

Edison's conception of radio-activity is that "the rays which radium and other new elements emit are rendered fluorescent by some form of all pervading ether vibration which has not yet been insulated or measured," but the radium discovery appears to have singled it out as similar to, if not identical with electricity, and the term electron would seem an appropriate synonym for ion.

The phenomenon of wireless telegraphy would seem to add strength to this view, for what are Marconigrams but the regulated liberations of these electrons or radiating units controlled and sent on their lightning way through ethereal space and recorded by marvellous mechanisms of human invention.

We have reached an age when we marvel at nothing. When a grain of musk, after months of exposure perfumes a whole boudoir, yet loses none of its weight, and when the human voice may be conducted thousands of miles on a tiny wire; when a revolving cylinder of wax may catch and record and reproduce that voice and the words it utters, when a stream of invisible force generated by a dynamo and sent along a wire may propel machinery and send us swiftly over rail and space; when atmosphere and gases that enliven or kill and burn and explode, may be evolved

has been rubbed with the flannel, it is passed over the box containing the radium, its power to attract pieces of paper is lost. Mammals are killed by exposing them to the radium from a distance. Mice were used, and were placed in glasses which were covered with a gauze sheet of zinc. The radium inclosed in a box of gutta percha and metal was placed upon the cover. Such animals died within four or five days, under symptoms of paralysis of the nerve centers, while mice similarly confined, but not exposed to the radium, lived and were in healthy condition. Upon the human skin radium thus used exerts an irritating influence and produces a dermatitis. Arterial blood is darkened in color under the influence of radium rays. The blind who are slightly susceptible to light have this susceptibility much increased when radium is brought near to the eyes. The blind who have no susceptibility to light do not react to the action of the radium. The blind who can detect indistinct shadows of objects upon a light background, under the action of the radium are enabled much more sharply to outline the objects. Persons with sound eyes, if the same are closed and tightly bandaged, perceive the light when the radium is brought within ten or fifteen centimeters of their forehead. Microscopical examinations may be made in a dark room by means of the radium rays.

from inert minerals and from the water we drink and the air we breathe; when fulminates that rend forests and shatter cities, may be instantly transformed from quiescent substance and instantaneous destruction immediately follow peace and apparent security.

This is the era in which you are entering the greatest of professions. Great forces of nature for good or ill are at your command. Yours is not to destroy, but to repair.

That chemistry which can provide so much destruction, gives you also instrumentalities of reconstruction. It gives oxygen, argon and ozone and congeals the atmosphere to restore vitality and the vitalizing iron, phosphorus and lithenes and other reconstructive products of organic chemistry and the enzymes and peptones to aid, supplant and reconstruct the tired machinery of digestion and assimilation, strychnia and electricity and predigested foods to support, while nature works to your hand. It gives you local and general anaesthesia, chloroform, ether, cocaine, codia, morphia, atrophia and the coal tar derivatives to assuage pain; and it gives you chloral, sulphonal, urethan, hyoscine, hyoscinamin, the valerianates, bromides, lacucaria and other agencies to tranquilize and promote sleep, that sweet restorer of tired nature which we must often invoke for the ill, the brain-broken, the nerve and soul-weary and the neurotically heavily laden in this strenuous life of brain and heart and mind and nerve-strain.

These agencies and a thousand others are your resources, to be added to that dernier and potent resource, the knife, when wielded by skilled hand and enlightened diagnostic and other therapeutic skill, are your aids in ministering to the welfare of your fellows who shall fall physically or mentally maimed in the battle of life and look to you for help.

The past decade has given us in neuro-cytology the neurone conception of Ramon y Cajal with its newer and clearer views of the nervous system; with its motor, psycho-motor, psychic, sensory, heat, inhibitory, metabolic and other centers. These discoveries give us better views of brains and bodies of life organisms, of the blood's circula-

tion, the air we breathe, the fluids we drink, the foods we eat and all the vital movements of our system and our environment and the conditions of our being. Life is health, and disease is coming, each day by the aid of these revelations, to have a broader and deeper significance. We are daily learning more and teaching better, both ourselves and the world, of normal physiological or healthy and of abnormal or unhealthy or pathological life.

Dr. Benjamin Rush drafted the principles of the Declaration of Independence before Thomas Jefferson embodied them in that immortal document of human rights. Rush went into the first American Congress, taking the place of a more timid gentleman who resigned because there was to be a declaration of independence and war, and Rush signed that declaration, which before Jefferson, he had been instrumental in designing. And after the war was on he found in the American May-apple, out of which our podophyllin is made, that efficient substitute for the mercurials and other collagues, which during the war of the Revolution were not allowed to come into our country. The genius of Rush was equal to the demands of that trying hour, and like Leonard Wood, his medical knowledge enhanced his ability in the other directions where the army's welfare was concerned. And there is William Beaumont, what place had he before the people? Yet see what he did. Neither William Beaumont, who gave the world exact knowledge of the physiology and chemistry of digestion, nor Ephriam McDowell, who first showed the world after the Caesarian section how to successfully enter the human abdomen and save life, nor Marion-Sims, who saved the health and lives of thousands of women by perineoraphy and suture, nor G. E. Brown-Sequard, who taught the world a higher neurophysiology, taught the vicarious functions of the cerebral hemispheres and made epilepsy a tractable malady, nor that brilliant surgeon, Paul Eve, of your own state, nor Samuel Gross of Kentucky, nor the accomplished Stone and Cartright of New Orleans, the latter a preceptor of my early days of medical study, nor Crawford-Long, who gave us anaesthesia, all sons of our sunny southland, and they have

never received merited popular recognition in monumental memory among the people's immortals.

And there are Wells and Morton, both also closely identified with the discovery of anaesthesia and its practical application to the alleviation of human misery, and Dorothy Dix, the philanthropist, who caused to be built eighteen state hospitals for the insane. I might continue to name scores and hundreds of unrecognized and unhonored men of medicine at home and in other lands, who are unrecognized as they should be by the public. We of the profession remember them with gratitude and honor.

But why have not the people honored them as they ought and as they deserved? Their benefactions on the race have "Fallen like the gentle rain upon the place beneath" and blessed both giver and recipient, but like the hidden providences of the all-provident Provider, the silent blessing of our ministration, in hygiene and prophylactic suggestion, and in potent sanitary reform and provision for man's welfare, have been accepted thanklessly and often unconsciously by the people.

Why is this so? It is not, as you see, because we have not done much for the world. It is because we have not enforced a just recognition of our service to mankind. We have worked and waited and gone unrewarded because we have been silent before the people and let others who have less claims on popular gratitude and reward usurp the place in public esteem that belongs in much larger degree than it has been bestowed, upon the votaries of the true Aesculapean art.

The quacks, with a modicum of knowledge and a moiety of brains, who are often only drug clerks or insignificant men without conscience and with little or no knowledge, proclaim from the pseudo-scientific side and from the housetops and through the press who are not so cautious as they should be, of the harm they do the greatness of medicine to cure, in manner that ultimately works harm by its failures. The patent medicine and systems of quackery of a decade or two ago are now seldom heard of—newer quack remedies have taken their places.

We are not appreciated as we should because we do not take part enough with the people. We do not talk enough of legitimate medicine and its resources in public places, but let the quacks mislead the people. We retire too much from public contact and from politics and do not seek and fill all the places before the people where medical knowledge and skill and counsel are needed.

My advice, therefore, is for you to become thorough physicians by intimate association with each other and then take your proper place among the people. Be fond of your work and study, but be not too exclusive with the people. Encourage the best men among you to become public men and hold office, for the good of the profession and the people and to raise the plane of politics to the high plane of your great and noble profession, whose aim is and has ever been, from the earliest time, the highest welfare of mankind. A public man like a physician who lives in accordance with the oath which the father of medicine administered to his disciples, lives by the decalogue and the Golden Rule.*

Hippocrates was a heathen physician or perhaps an agnostic heathen; he did not believe in the miracles attributed to the goddess of health any more than we do in the faith of the faith healers and faddists of our day. But he had a code of moral duty and enjoined it by an oath upon his disciples. Let me enjoin your obedience to it. It is the golden rule of medical ethics and true fellowship.

While sordid commercialism, now threatening our de-

*The Hippocratic oath was as follows: "I swear that I will keep this oath and this stipulation; that I will follow that system of regime which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous,

"I will give no deadly medicine or suggest any such counsel.

"With purity and holiness I will pass my life and practice my art.

"Into whatever houses I enter will I go for the benefit of the sick, and will abstain from every voluntary act of mischief and corruptions.

"Whatever is connected with my professional practice, or not in connection with it, that I see or hear in the lives of men which ought not to be spoken of abroad I will not divulge, as reckoning all such should be kept secret.

"While I continue to keep this oath inviolate, may it be granted me to enjoy life and the practice of the art respected by all men of all times. But should I trespass and violate this oath may the reverse be my lot "

struction, serves the world "for what there is in it" for the commercialist, forming combines and syndicates and misusing and perverting the tariffs for the financial betterment of themselves and the worsting of their fellows, our motto is the welfare of mankind and incidentally our maintenance along with the good of our fellows. Our mission is to up-build and strengthen for the happiness and good of the world.

It is a great profession, is it not, with which to cast one's lot in life? It has given the world certain safety from many once devouring diseases. Its beneficence begins with man's life before he goes into the cradle and follows him to the grave. It has secured his safety from smallpox. It has driven the yellow fever almost completely from the land and it is now pointing the way of safety from that great white plague, consumption, and from the Eastern bubonic plague, and from our own scourge, malaria. It has sequestered, and in some instances, cured the leper and found its fatal bacillus. It has taken the fangs out of those serpent diseases, in this audience, unnamable. It has rescued, and is rescuing thousands of victims from death by timely operations upon and within the head and abdomen, nerves and arteries. By antisepsis and anaesthesia it has saved thousands upon thousands. It has mitigated the terrors of typhus, typhoid and phthisis, by showing their causes and avoidance. It has mastered many diseases and caused milder morbid conditions to take the place of others.

It stands guard at Castle Garden and other seaports and turns back the diseases of European crime, pauperism, neglect and degeneracy and guards our shores against other pestilences of the old world. It has in a thousand ways made modern life an enduring possibility under the otherwise adverse influence of our too strenuous conditions of existence and other exhausting influences of a too intense, exclusive and morbid commercialism, that have made the mighty dollar the chief aim of living.

It has founded or been the inspiration in founding hospitals, sanatoria schools and homes for the foundling, the infirm, the aged, the sick, the insane and the feeble-

mind, and devised gymnasia and rest cure resorts for the well that they may not become sick. It has rescued the lunatic from bonds and freed him from his chains and treated him as a sick man and saved him. It has likewise shown inebriety to be a disease and now cures its victims. It has diffused and scattered its blessings so unostentatiously, gently and so lavishly among the people and its benefits have been bestowed in so many ways in dispensaries and charities and hospitals innumerable, wherever the maimed in the battle of life are to be found, that its great beneficence has not been appreciated as it ought, and its power for the welfare of the people not understood and felt as it should.

If this is not so why has not a place been made by a grateful people for a medical man in the cabinet of the President of the United States and why has not the statue and face of Benjamin Rush, Surgeon General of the Army of the American Revolution been placed in Helen Gould's Pantheon of great men? Why was not Rush given a place in Washington's cabinet? Washington honored Rush, though Rush did not agree with him politically. Why has not the Surgeon General of the Army and Navy been given a place in the cabinet as well as the Secretary of War, etc.?

It has discovered how alcohol, through beverages that contain it, damages the nutrition and integrity of the brain's arteries, distends them by vaso-motor paralysis, thus changing the blood supply and damaging the brains, neurones and membranes, as well as harming the liver and stomach, kidneys, etc., and from your teaching and example the people may learn lessons of caution and temperance with regard to the drink that destroys heads and hearts and households and bankrupts lives and minds and shatters commercial and professional credit and destroys manhood and personal honor.

It stands, I repeat, between the people and the pestilences that destroy them and through its patient, painstaking, courageous endeavors, these plagues are stayed. It walks and works in the wake of devastating armies and

helps to repair, by enlightened medical and surgical resource, the ravages of war and to avert them. It watches over camps, where death with its microbic millions revels in human destruction and destroys the messengers of the grim monster, unseen by human eyes, without the lens. It makes the warrior strong on the battlefield and gives him hope in the consciousness that the help of a great and resourceful profession will come to his aid should he fall in battle or by microbic sting, deadlier than the enemy's missive. Wherever danger of disease is, there is the doctor to help and sustain and lift up mankind.

I do not subscribe to Ella Wheeler Wilcox's vicious poem:

“Laugh and the world laughs with you;
Weep and you weep alone,” etc.

This poem is a sarcastic and cynical description of a class. It does not correctly portray our kindly humanity as a whole. Our noble profession in its daily round of clinical duty and in its work of mercy refute it; this institution with its hospital attachment, its worthy faculty and nurses refute it; all the great world's charity and philanthropy, clerical and secular, refute the coldblooded sentiment, too. The graves of the volunteers in yonder cemetery who came to help succor the victims of the yellow plague and fell, themselves a prey, refute it, though some of their graves are yet unentombed. A sentiment too coldblooded and cynical to rightly come from the lips of woman, save in cynical sarcasm of a despicable minority in the heartless class only, of the world's many people. Were I to sing an answer, I would say:

Smile and the world smiles with you;
Weep and you weep not alone.
For this heart hurt world has other hearts
That beat in feeling with your own.

Cultivate the amenities of life. Be good and true to yourselves and to each other. Practice the habit of showing kindness; it will react reflexly upon your nature and enlarge it and help you to help those who fall in your way

for your skillful ministrations. Kindliness and cheerfulness and honest hopefulness, based on study and knowledge, will add to your skill and success at the bedside, in office, and with the world in general. Be true in all the exalted relations of your profession to patients and people and you will find this a really pleasant world to live in, despite the intercurring illnesses and misfortunes of life and its people, kind and good and true as a rule, if you are kind and good and true to them.

You will find them out reflexly. For, heart to heart is a wondrous reflex of smiles and tears, of hopes, woes and joys, of sorrows and tears. Get close to them and treat them well and they will, as a rule, return your charity, your generosity in kind. Not always, for there are ingrates and sore-heads and sour-tempered kickers and misanthropes, misconceived and mismated abortions and squint-eyed brains and strabismic hearts, owned by people who live wrong side up and wrong side out and wrong end foremost and inside out and outside in, in this motly show of life. But get close even to them, with a warm heart and kindly conduct, and even they are not always so bad as they look. They are prettier than they are painted sometimes, but it takes more of the paint of charity to gloss them over into presentable appearance than you can sometimes afford to waste on the job. But be kind to them, if you can, anyway, and charitable, for some of them are built that way by a bad heredity and can't help being cross-grained, ill-natured and sour, sordid, sore, suspicious, hoggish and cynical and cussed, so easily as some who have come into the world better endowed and lived in a more sunshiny atmosphere of environment.

In this country, whose government derives its powers from the consent of the governed, with occasional exceptions caused by the corrupt boodler, grafter or that other political Judas, the "legislative agent," who generally calls himself a lawyer, the state is a composite political picture of the people and it is the duty of the medical profession to aid the people in the development of sound brains in sound bodies, to eradicate the degenerate and the

decadent who are unfit for citizenship. "*Mens sana in corpore sano*" should be the shibboleth for the franchise and it should extend to the immigrants at Gastle Garden and the voters our courts make of foreign citizens, and to the native born, without distinction. As physicians, we should demand physiological qualification for the franchise. The decadent in organism, as of mind and morals, should be dropped from the voting list.

The greatest duty before the medical profession of our time is to seek to learn and then to advise the people and the state how to sustain the over-strenuous life of our day among so many of the aspiring and ambitious, so that they may not, so often and so many, fall prematurely broken in endurance and wounded unto early death because of ceaseless overstrained activities and striving for success and sometimes for existence, even among their fellows.

Action, always action and the motto of Napoleon's dazzling success and premature ruin to himself and people. Audacity! always audacity! is putting our Nation and our people on such a strain, especially among the Napoleons of finance and the admirals and generals of gigantic business and commercial strategy, that the strain of organism that brings premature exhaustion, brain-break and vital ruin to this and other nerve centers of our men of action, so often long before their natural time of failure, must be met and mastered by research, resource and hygienic admonition and remedy.

Our masters and past grand masters in the business world should hear from us incessantly as they live in action, the doctrine of rest and regulation of their anatomies, and be warned by us of the dangers of over-action and over-stimulation, especially alcoholic stimulation and over-time night-strain.

There never was a time when great and capable medical men were so much needed as now. Mediocrity and grasping avarice rule in our legislative halls and statesmen are few. There are not too many physicians of the right sort. There are not enough and there never will be enough physicians among us, if the strenuous life

of our day goes on as now. Without medical support and popular medical enlightenment on the conservation and repair of brain power, the collapse of their vital power will come to the people of the United States and this over-stimulated, proud and powerful Nation will take her feeble and insignificant place among the weak Nations of the earth undergoing extinction; when another Byron shall ask, as was asked of Greece, Rome and Carthage; shall ask of the Great United States of America, that continent of powers: Where are they? And the historian shall answer: They perished of unguarded over-strenuosity and over-stimulation while they were yet young. The Sun of the Great Western World Republic (for the whole vast continent is our destiny) perished while it was young. The sun of its glory set while it was yet day.

When the epitaph of this great people shall have been written by the historians of decadent nations, it will be recorded of us:

“They were a great people but they rested not; they stimulated when they should have slept. They drank alcoholics and like stimulants when they were tired. In their inordinant ambition they turned day into night and night into day and slept not as they ought. They gave much thought to business and professional glory and syndicate achievement and the vices and the indulgences that prodded them to the degree of self-destructive over-action, but little, too little consideration gave they to the repair of the machinery of mental action. They wore out their psychic neurones and the great nerve center organs of their once wondrous power. They passed into a morbid giantism and then into pigmies and then they perished. Over-strenuosity, vicious stimulation and unrest destroyed them.”

The machinery of imperilled minds now on the rack of present strenuous conditions of business and life itself in every form, in our large cities especially, will need your considerate attention and best resources.

It is the duty of the profession to avert the impending calamity of race degeneracy and extinction by helping the people to keep their organisms in repair and guard against

wrong marriages and wrong habits that lead to degeneracy, the depravity of the blood and poison of nerve centers that come of over-action, over-stimulation and insufficient rest and repair.

Your chemistry, your physiology, your wonderful new therapy will be needed to sustain the strenuous life of to-day, and it has just come to you timely. How our good and worthy fathers in medicine would have rejoiced to see this day of wonderful therapeutic advance. They who had to take away toxic blood and make it anew by the slow process as of vital reconstruction of their time, as compared with ours, and relieve congestion by venesection and purging alone, because they were without our additional agencies to constrict the caliber of distended vessels, causing disease in vital organs. They who had neither our antisepsis nor anesthesia, our hypnotics nor analgesics.

The average business man, while he has been on his feet, has hitherto despised the doctor, but he is learning better now. Too many of his comrades are falling suddenly about him, of so-called heart-failure, which is the sequel of over-strained brain and vagus nerve innervation failure as well. Too many are dying prematurely of other causes, beginning in neurasthenia, cerebraesthesia, hyperaemia and vasomotor and visceral over-strain. They will consult you in the oncoming days, as they now do their lawyers, and not wait till they cannot read the ticker or figure profit and loss, before calling on you for aid. The coming doctor will not be called to see people chiefly in bed, as now, and conduct patients through long sieges of perilous illness, wearily watching and waiting on assaulted nature. The wise citizen will call the doctor a little before he thinks he may be on the road to the cemetery. As things are going now, there are not, and will not be, too many doctors for the needs of the people.

Indeed, there are not medical men enough to protect the people from the consequences of the strenuous life; not enough to save them from their sins against the physiology and anatomy of their own organisms, under the strain of over-effort, over-stimulation, over-indulgence in follies of deed and thought and fake and fad medication.

The over-strained and unstable psychic neurones are breeding today foolish religious creeds, popular heresies and propensities to evil and crime, which can only be corrected through a better knowledge of how to live and maintain the integrity of that substratum of all good judgment and sound, steady mind, a well sustained and rested brain.

The time is upon us and before us, when the people must learn what the medical profession knows, and is yet to further know, about the conservation of vital energy and neurone force and put the knowledge in force and practice in correct living, if they would save themselves and the state from destruction. New demands for brain power make necessary further knowledge and provision for conserving and imparting brain strength. This knowledge of the profession must become the practically applied knowledge of the people and the state. The state is what the qualities and powers of the people make it and the people are what we make them by our counsels.

Legislation should be aimed against the diseases and morbid influences that degenerate and immoralize the race. Then will disease and infirmity of body and mind and pauperism of body and spirit begin to disappear from the face of the earth, and those institutions for the care of the imbecile and the insane, the hospitals for the psychically ill and the reformatories and penitentiaries will cease to be so much needed as now, because the causes of morbid crime and criminal disease of mind and body will have been reached and remedied by medical science applied to legislation and to the lives of the people. The services of the doctor, as a minister to disease, will be in less demand and the occupation of the lawyer will likewise be gone, because a strong-brained, level-headed and healthy-bodied race will avoid litigation, as we now shun the "pestilences that walk in darkness and the destruction that wasteth at noon-day."

My advice is to stand with your tribe,* as your ances-

* When as a youth, before the late unpleasantness, Fred. Nichols, the Old Man of the Avalanche, was dining at my father's house, I asked him what he would do if war broke out

tors north and south did, before the late unpleasantness between the states. Stand for your profession, join a good local and National Medical Society and insist before all the world on proper professional recognition in public places. Insist that a place be made in the cabinet for a doctor, that the pay and place and rank of medical men in public service be commensurate with their merit, from cabinet officer down through the army, navy and marine service to local health officers, coroners and, even oil inspectors, who should be either doctors or chemists. Let your efforts be for medical places, for medical men everywhere, in public service and for the rights, interests and just recognition of medical men everywhere where they should be.

On Bedloe's Island, in the harbor of New York, stands the statue of Liberty Enlightening the World. Under it have passed landward, in days ago, the mental cripples and cranks and bodily diseased of Europe. Many of these under our influence are now sent back and more are to follow, but still they come, in thousands monthly, the political cranks and criminals, moral imbeciles and political degenerates, born, not of liberty, but of conditions that dwarf and distort the brain and unfit them to live rightly in the atmosphere of freedom.

It will be your duty to show how men, high-minded men, with neurones well nourished on the invigorating soil and in the atmosphere of law-restraining freedom, can make men fit for the Freeman's franchise in these American States.

Men are much as their brains and minds are builded. It will be your duty to show the people by example and precept and by instruction derived from the fountain sources of anthropological science, how right brains and minds are built and how states that are strong can only build on sound neurone material.

between the North and South, he said: "I guess we will all have to go like the Indian, with our tribe."

And that is about the way it went. The heart is stronger than the head. A lunatic at Fulton, Mo., on learning that all the patients were to be sent to their respective counties, said the whole country had gone crazy and there was no use in us few lunatics staying housed up any longer.

The time is coming when we must have statesmen again; when the Jacksons and Websters, Clays, Calhouns, the Jeffersons and Hamiltons, Bentons and Bells, the Washingtons and Henrys will come again to the political surface to brighten our country's skies and study and labor for the people; when the pothouse politician, the boodler, the grafter, the legislative agent, the lobbyist and promoter, who do the people for themselves, will give place to men who do for the people's welfare. Among the latter, the doctor-statesman will be there, as our Benjamin Rush and other physicians were in evidence in the days that tried the souls of men and the hearts of women, at the birth of the Republic. Among them there should most appropriately be some of you, for the trend of a medical man's training is in the direction of the peoples' welfare. In the future president's cabinet, as sanitary counsellor to the chief executive and the advisor for the country's welfare on matters of public health, some one of you should find a fitting place. Aim for the presidency if you will, so that you may hope to fall among the cabinet.

The more medical men the people get in the public service, the better it will be for the people. When the omnipresent lawyer and his ready gift of gab and multitudinous precedents, telling how things were done "before the war" and Magna Charta, and should be repeated now and forever more, shall make way occasionally in public life in the better time coming, for the man of sanitary science, the man of bacteriologic and biochemic knowledge, familiar with Nature and her resources in relation to man's welfare, it will be better for mankind.

When you go out into active practice, syndicate your efforts; get together; join yourselves into companies and found community hospitals with all the modern aids to research, and appliances for relief and cure, beyond the resources of a single man, especially in surgery. Look well after the perfect exploration of the body and its toxines, its microbes and the diseases which cause, accompany or invite them. Have among you all the instrumentalities of research—test-tubes, reagents, microscopes, electricity,

X-ray machines, radium and Finsen ray appliances, surface and clinical thermometers, endoscopes, ophthalmoscopes, cystoscopes, laryngoscopes, stethoscopes, etc. Explore the dark places and secret recesses of the organism; bring to light the vicious processes in the kidneys, the lungs, brain and other viscera that threaten destruction and life.

No one man can do all this, so you must syndicate your research if not your business; agree among yourselves who shall be especially equipped for this or that research work—one with the reagents of urinalysis, another with endoscopic research, ophthalmoscopic and auroscopic, uteroscopic, vaginoscopic examinations if you have not among you the highest type of fully competent exclusive specialists in these departments. You should get together in this way, harmonize in your work, charge the people better prices for better service than for imperfect and incomplete work, and when you shall have then gotten together and shown the people what true medical science and its wonderful resources are, select a good medical man, by preference over all others, for state and national office and stand by him in all he may do for the good of the people, especially for their sanitary welfare. There is much yet to be done in the direction of enlightened sanitary legislation besides good, pure water, perfect sewage systems, garbage incineratories, clean streets, sidewalks and public places free from disease germ sputa.

Those who expectorate on the floor of their own or another's dwelling, on a hot stove, a hot air or water or steam coil, or register, should not expect to rate as a gentleman in a sanitarian's estimation.

There is also the ice man who gets his ice from a contaminated bayou, pond, river or lake, or who makes it antiseptically and yet sends it uncovered through our streets and drags it from wagon to door over the microbe-contaminated sidewalk. There is also the beef man, who may slaughter cleanly enough but sends his dressed beef or other meat unprotected to the butcher, from the shoulders covered by clothing that may not have been innocent of microbic colonization since the death of the little tailor that

the devil got with the cabbage and the broad cloth under his arm. And the baker follows the butcher with bread exposed to contamination to be delivered to the people. Then there is the diligent and frugal dago who sleeps with the fruit of California, Italy or Spain, wipes his fruit with his own mouchoir, wet with his own spittle and makes it shine like his kid brother does your shoes.

Then there are also the thousand and one other commodities that come from questionable places through sources of contamination to our tables—the water, the beer and ale on draught, the whiskey drank at bars, the glasses washed over again in the same tub, and the dust-laden candies and jams that tickle the people's palates and fill the pockets of the undertaker after the doctor has signed a death certificate of tuberculosis or toxhemia.

Finally, gentlemen, make your good influence felt, not only on the profession but on the people. The ethics of your profession enjoin this. You are not to advertise like the quack your wondrous skill to cure particular diseases, but to enlighten them about themselves and to interest them against disease and its causes, which are all about us.

Gentlemen, foster in yourselves an indomitable spirit of achievement for your own good, the good of the profession and the people. Do something worthy. Return an account of your talents to your Alma Mater who has hopefully entrusted their better keeping to you, neither rusted nor damaged by age nor neglect, nor folded in the napkin of disuse and indifference. Return them ten, twenty and an one hundred fold, if you can, and you will have consciences void of offence toward yourself, your fellow men and God, so that you may lie on a bed of peace and dwell in a house of plenty in the latter days of your life. Your contemplations will give you happiness and satisfaction. Your retrospective reveries of the part you shall have played in the world will be pleasing, and your dreams of the future beyond all mortal ken shall be hopeful and bright.

The specter of misspent time will not rise up to make you unhappy, and there shall not come to you from "be-

neath the shades of funeral cypress planted thick behind” “reproachful whispers on the wind from your loved dead” or from the loved dead of any whose lives may have been entrusted to your sacred care. Despite your best intention, weak and sinful as we mortals are, you may fall short sometimes on duty and cast a sad and half-reproachful look over some of the “pages of your memories past.” But if you have, as you may in your career,

* * * “lent strength to the weak, or in the hour of need,
Mindless of his home or creed, over the suffering form have bent,”

and ministered mercifully with such skill and knowledge as unneglected opportunity shall have given you chance to acquire, you shall not have lived in vain. You will look backward “with thankful heart, and with hope before,” assured that from the good works of your life you shall nevermore part.

ADDENDUM NOTE.

Insidious changes are taking place in this government our fathers of the Republic founded by and for the people. The links of the chain of popular golden rule fraternity have weakened much since our worthy ancestors combined and pledged their lives, their fortunes and their sacred honors to overthrow monarchical and special class tyranny, and new tyrannies have sprung up instead—tyrannies no less baneful than those our sires overthrew. These tyrannies of combinations for public plunder in legislation, in office, in business, and of late even in some of the labor unions and employers’ combines, will require your attention as citizens. Then there is also the negro, which you are always to have with you. You will come in contact with him in his home and will have a chance to help him by good hygienic counsel to right manner of living and to a higher civilization. He has lost something, as well as gained something, by being free from the white man’s paternal restraint and advice, as those of us who know him best do know.

THE GENTLEMAN DEGENERATE.

A HOMOSEXUALIST'S SELF-DESCRIPTION
AND SELF-APPLIED TITLE.

Pudic Nerve Section Fails Therapeutically.

“**H**OW often is there delivered from the womb of some noble and grand woman—some little soul, scarred in such manner that stigmatizes its after life and brings a stain so deeply colored as to stamp it in the eyes of the world a ‘social outcast and criminal.’ How thoroughly ignorant was one good mother of the burden of sorrow which was fast developing in a boy upon whom she was counting to be an exemplary character in the eyes of his fellow man and as she often expressed it, in the eyes of God—for there was no more queenly type of the true Christian spirit than that which seemed to complete and envelop this good woman. Thanks be to a God whom they say does everything for the best—this darling woman went to her grave knowing nothing of a terrible affliction which had virtually possessed this son from the date of his birth, and whose absence from her dying bedside suggested a picture of neglect. Where was he? In a little room in the wilds of a distant part of the country, bowed in grief, realizing that he could never kneel at that bedside claiming to be the offspring of such a God-like woman, irrespective of the fact that no responsibility rested upon him and with the full knowledge that, had anyone blamed her, the son would have become a raving maniac.

“The few lines which are written above are simply the preface of a statement which is intended for such who feel that they can gain anything from it in dealing with cases

of a like character. We are well aware there is ever a possibility of some good man being thrown into a dungeon for things which are a part of his being, but who is honest, upright, gentlemanly in his manner to others, and who would gladly take flight from a social evil known as sexual perversion, were his brain or mentality so constructed as to enable him to do so.

"The animals in jail for theft and murder and other like fiendish crimes would, even in their absolute indifference to everything going to make up a good man, regard the condition above referred to as honorable. Society has to be protected, of course, yet should scientific men not exert themselves to do all in their power to save the well-meaning from degradation and ostracism which naturally follows such affection? Take our most charitable citizens who are ever ready to rescue the unfortunate from the slough of despond. Is it not in their own nature to shrink from those so cursed, but whom they know in other respects to be their equals in point of birth and general intelligence, and a desire to be clean?

"Thirty-nine years ago there was born to a couple in one of the far eastern cities a son—the subject of this discussion. The father was a gentleman of decidedly liberal education, being born in Ireland and graduating from one of the old world's best colleges. Being an Irish patriot he naturally figured in the rebellion of '48, which meant death to him, unless through intrigue he could escape. Such version as the son was given, of the flight, need not be mentioned here beyond the fact that my old Irish nurse assisted him to the seaport, where he was enabled to jump on board and claim protection of the Stars and Stripes—falling upon his knees at the time, looking upward, thanking God that he was a free man and enjoying the benefits of the emblem of liberty—the American Flag. Upon reaching the United States he became interested with several other Irish patriots—whose names are watchwords with the Irish as well as the Americans familiar with Irish history—and established or edited a paper known as the ——. Owing to the excited condition

of Irish affairs these patriots separated; my father going into another city and state and being immediately taken up by an Irish gentleman and placed in business. It was not long before his attainments became known, and he was recognized as one of the leading intellectual lights of the city, which claimed the distinction of possessing a highly cultured class.

"In the course of time, it being vouched for that my father filled all the requirements of a true gentleman, he became interested in and married a woman who was almost his equal from a literary standpoint—it being almost a puzzle when any question of philosophy or any other studies amongst the older children arose, which to ask—father or mother. However, that love for mother asserted itself and we wanted our father to think that our mother was the brighter and in nine cases out of ten her solutions of problems were correct and our father had nothing to do but admit it. (The object of the writer in mentioning these points will no doubt be understood by those under whose observation this statement may come.) The marriage was granted under dispensation of the Pope—yet as in most cases of mixed marriages unhappiness was ever conspicuous, every child, however, always sided with the mother, and her religion was courted although she herself never interfered. Aside from this my father was associated with politics, and like most of those who are ranked reasonably high in the same, the liquor habit made its appearance, also epilepsy. This entailed great hardships upon a proud family and it is needless to say many were the trials and tribulations in that family. If I am correct it was more of the Jacksonian epilepsy than the idiopathic. There was always a peculiar noise preceding the worst of these spells, and the whole family were greatly alarmed. As young as I was at the time I knew nothing of the cause, but regarded it as due to drink. Irrespective of the family clashes over religion, he was at times very kind to his children, and many times when he saw the ship sinking, many times did he call his children to him with tears in his eyes, realizing that he had been the cause of much

unhappiness and it was still lurking within reach of his children, to develop to the point of sorrow (in one) that of a social outcast in the eyes of the world, however, but not in the eyes of One whose ways are most mysterious. This father passed away after a lingering illness due either to epilepsy or apoplexy. The priest was there to perform the last rites of the church—yet as he had not been a Catholic in good standing his remains had to be placed in Protestant burial ground. His pallbearers were men of the highest standing in the community. It was at least certain that with the last flicker of life his mind was on his dear old home in Ireland and the woman upon whom was devolved the correct rearing of the children he left behind. Was her task easy? No. Many sacrifices were made by her and so far as the daughters were concerned there was nothing to worry about—of the sons, upon two came sorrows for which they were irresponsible, the third still remains close to his sisters and the absent one hopes this boy may be spared to give them that protection which a brother should, for the mother is no more. With the flight of that soul some fifteen years ago went the whispered words, ‘Why does my boy remain so long at the market place?’ It is needless to state that when the announcement of this death was communicated to him—that his hand went up in supplication to the Almighty to give him that manliness and character that his mother wished, in order that he could be a companion for his sisters, one to whom they could look up to and take pride in.

“Was this son regretful at his father’s death? At that time, no; for he felt that he must have been aware of his physical condition at the time he married a grand and beautiful woman.

“THE SON

“a regular ‘girl boy’ as he was called, always afraid to tell a fib—never using bad language, never smoking nor chewing, thoroughly honest, shunning the girls and always having some boy friend he fancied for his good looks and endeavoring to show him some kindness in the way of making him

presents—never cared for an ugly boy—in fact did not know why he particularly cared for any, always studious, receiving high honors at school for thoroughness in his studies and exemplary deportment. The child mind not understanding the features of certain matters recalls his desire to bunk with any gentleman who might be the guest of his father, and to them, no doubt revelations were made, but naturally ascribed to childish innocence. I felt myself growing stronger in this way. In other words showing a preference for such society and ignoring girls—yet being timid in the presence of both male and female—was frequently twitted about it.

“This of course became an annoyance to me. I would never associate with girls and always felt slighted when some boy schoolmate whom I liked would run off with a crowd of boys—was never physically or morally courageous, but always terribly hurt when anyone doubted me. This was done to worry me as they all knew I was quite an honest lad. My method of resentment would usually be to run up and give the hand of the aggressor a good bite. This melancholy condition continued to grow upon me and it was fast dawning upon me that it would be something to disgrace me in the eyes of those whom I had known all my life, and the shadow would naturally fall upon those nearest and dearest to me on earth. I recall two gentlemen—one especially handsome—whom I knew who had gone west to go into business, and seeing the danger pursuing me, I wrote to them for a position. Mark this peculiar phase of the case. I felt in some way I could enter into some peculiar relationship with the good looking man. But upon reaching my destination I found the party in question prospering, yet so changed that the impression first made become a mere nothing. The writer was at this time about nineteen or twenty, had never touched a drop of liquor, never smoked, chewed, used coarse language or gambled, associated himself with the church (because his mother wished it) and led for a while a good life but was terribly homesick. Going back to the trip, there were just a few little incidents which I recall that made an impres-

sion upon my mind. I ran out of money, with the exception of twenty-five cents, when I was half through the trip. I made up my mind not to borrow, so when I reached territory adjacent to that of our own country, the engine having stopped for water, I ran across the line, so I could say that I had been on foreign soil and bought a little bologna sausage and bread and was badly scared when some Texan said that there was smallpox over there. But I was very hungry and ate the bread and sausage all the same. I did however have to borrow a dollar before reaching —, yet the party who obliged me, I did not care for, as it occurred to me I was in the clutches of a desperado or 'con' man. I returned the amount immediately upon reaching my employer's headquarters, and gave him a polite farewell with thanks for his kindness. Incidentally here I was considered by the people on the train as a young man actor or priest.

"It appeared from the start that I was well liked in my new position and for some reason it occurred to me that I would make a success socially. I carried letters to some of the best families and soon discovered that for one so young and being a little extravagant I was doing well. In a non-professional way I became identified with theatrical, lyric and dramatic people and soon found myself in the social whirl—yet withal, the eye was for the man instead of the woman, that is handsome appearing men. Liquor was soon with me one of the necessities. A handsome man meant the tinkling of glasses. I will leave to those who are interested in the case from a physiological standpoint what at times would follow, in addition to frequent chastisement. Haunting the parks, seaside resorts and other localities, a lonely man afflicted, no hope of cure as intimated by physicians and neurologists, this being repeated to me in all localities, large cities and small towns. This man who has found rest for a time on the tops of mountains with nothing but God's shelter for him, this man who has sat in the woods with only the beasts of the forest for company, this man who has been on the seashore, with not a soul or house in sight, watching the terrible dark

breakers splashing and dashing with but a flickering light here and there to startle him from the great burden under which he was placed. Why has he handled the pick beside the common foreigner, why has he exhausted himself in pulling heavy timbers over rollers in the large mills on the coasts, at night? Why has he picked the hops in the field of the Northwest and, to escape error, crossed the continent again and again to pick apples in an orchard in the absence of other work? Why all this? Because he wished to save his family and the name of the good mother who bore him.

"Twenty-five years of this misery is a long time for such torture, yet the struggle goes on. If the wishes of this lonely man were realized, and he trusts it may not be long before he may find the surroundings illumined and he be enabled to step into the sunlight—a clean and wholesome man—or in the absence of such bliss—his mother's arm be extended down from the region beyond into which he may be embraced and find that rest which may be emblemized as eternal."

These autobiographic reflections of a sexual pervert, with reverse sexual instinct feelings and impulses, are given place here, as contributing to complete the portraiture of the homosexual form of hereditary perversion and also to call attention to the often revealed psychic accompaniment of morbid egoism and craving for sympathy.

Such of this class who have come under my observation and care as patients, have been inclined to write up their cases, without suggestion to that effect and without urging. The morbid egoism to disclose the self-feeling is like that of Claud Hartland, another patient of the editor's, whose book was excluded from the mails.

This narrative does not give details, but were similar to those described by many of Kraft-Ebing's patients troubled by homosexuality. In this case an operation was performed on the filaments of the pudic nerve supplying the testes, but the morbid inclination still persists, notwithstanding the operation and a course of chologogues, anti-septic intestinal treatment and full bromism.

This man is a competent accountant and a cultured

gentleman, much distressed still by his persisting malady and has asked to be castrated and talks earnestly of suicide as a not far distant resort in the event of failing of relief. This case appears to be in the head and not in the genitals.

Having endeavored after this operation to convince this unfortunate man that the trouble was now in his brain and mind alone and that he should do as other men have to do and do do, keep his passionate impulses in abeyance to the higher purposes of his nature and the nobler ambitions of life, he answered as follows:

"What you claim can be accomplished through efforts on my part is impossible—of course you will dispute this. Were our positions reversed for a month, you could understand. If the difficulty is with the head, all I have to say is that it has centered there with such vigor and tenacity that it would appear to me that the elimination of the trouble in one center has been doubly concentrated in another. The head of my firm has heard about my weakness and certain insinuations have been spread broadcast, resulting in my displacement from my position. I will be upon the streets next week—to go where—the Lord only knows.

"I can not change this unfortunate condition—for if I could it would be an awful stigma upon me if I did not. You are certainly a grand man—in your profession—yet there must be something about my brain construction that even is beyond you. Let me ask you—would extreme methods (you know my meaning) amount to anything? If so I will go into a charity hospital and have it done. Do something, I must. I have told you the truth. It means that or worse.

"You are the only man who can help me. Would what I have suggested accomplish anything? You may think this idle talk, but no one knows better than myself that it is not.

"Save my family I must; they do not know my whereabouts."

The sufferings of this unfortunate are real. The training of the inhibitory centers of the cortex over the lower centers of the brain and cord have evidently been sadly

neglected in this man's youth. The full sway of any of the passions tend to moral and physical habitual dominance of the passions in the hereditarily unstable neuropaths, with vicious and perverted passionate entailment from father to son, as appears in this unfortunate victim of congenital fate.

The medico-legal aspects of these cases of homosexuality and of some other cases of perverted as well as natural, but abhorrant sexual violence, obtrude here, but we will not now discuss them.

In a letter six months subsequent to the operation he writes as follows: "I am if anything, worse than before, as I now follow in the street those who attract me."

On the last of January of the present year this unfortunate neuropath wrote the following despairing letter:

"I am now convinced that from an experience in St. Louis during my last visit (an experience without consummation) that there is absolutely no avenue of escape from my trouble but to be placed under restraint, and if I can get back to St. Louis it is my intention to place myself in the hands of the authorities irrespective of the consequences, as I am certain to get into trouble, and I can not stand this thing longer. I know just what Dr. — and yourself would suggest, yet from the statement of other physicians — the trouble is of the head and there would be no certainty that the operation in question (castration) would be successful. You well know the debilitating experiences through which I passed after the first surgical work. I jumped on a train in St. Louis last night and followed a party clean through to South McAlester. I was expected back at the hospital that night. I spent all my money. I do not know for certain that I have a position here, as the company is in a bad way and none of the officials are in town.

"I came very near getting in serious trouble on the trip. If I am compelled to pass through another surgical operation it will have to be at the city hospital. My trunk and satchel are at the — Hospital. I feel terribly over this, as I promised Dr. — I would conduct myself with decorum. If the remedy he suggested is a sure cure, then I will have to accept it."

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

MEDICAL CENTENARIANS.—*The Journal Am. Med. Ass'n.* has translated and abstracted Picard's interesting historical sketch of this subject from the *Gazette Méd. de Paris* for April 4 and 11, reviewing also the life insurance and other statistics in regard to "when and how physicians die," quoting extensively from *The Journal*. Hippocrates, he states, is said to have lived 104 years, and 140 is ascribed to Galen by one enthusiastic historian, but not by others. Three Arab physicians are cited as centenarians, and Picard has found records in France of four before Patenôtre, who died in 1709, aged 103. Poncy, who died at Paris in 1724, was born in 1623 and practiced to 100. Politiman is another French physician who lived into his second century—his biographer states to 140—and was in the habit of getting tipsy every evening, as also Dr. Espa-

nago, who died at 112. A portrait of a Dr. P. Defournelle, inscribed 1690 to 1810, is preserved at Paris, but the first official record of a medical centenarian in France is Dr. A. Chaule, born 1741, who lived to be 103, followed by Dr. Fau, also 103. Dr. Zalewski's death notice recorded at Bordeaux credits him with 111 years, and states that he was born in 1780, but no official record of his birth has been found, Dr. Bossy, who died at Havre in 1897 at the age of 104, was in such good health to the last that he made a trip to London three years before. His grandfather was 99 at the time of his death, and his father 108. The latter died at London in 1848 and had always enjoyed good health. Dr. Jean David of Montpellier celebrated his 102d birthday, February 10, 1903. He retired from active practice at 98. Picard has found four medical centenarians among English members of the profession of the last century and five in this country. The latter are Dr. D. D. Smith, Cairo, Ill., and New York, who is said to have married at 123; Dr. D. Burk, Washington; Dr. H. Courtney of Hancock; Dr. W. B. Sprague, and Dr. O. S. Taylor of Auburn, N. Y., concluding with Dr. C. Graham, whose centennial was celebrated by a banquet mentioned in *The Journal* in 1884, p. 549. Dr. Marvogenis was a Greek physician, who attained the age of 100 in 1898, and a Swedish physician, Dr. Ivervex, who is said to have invented an elixir which enabled him to live to 104. Only two Italian medical centenarians are mentioned and both died in the eighteenth century. A Dr. O. Kowansky in Russia is said to have served in the Napoleon wars and died in 1887, aged 109. He was paralyzed for sixteen years before his death, but continued his practice to the last. It is said that he dictated a prescription a quarter of an hour before he died. In Spain Dr. F. Verdugo lived to be 105, practicing at Salamanca for eighty years, until his death in 1867. Another Spanish colleague was mentioned in 1875 as 105 years old, living in good health with a wife of 103. Dr. David, above mentioned, seems to be at present the dean of the profession the world around. Picard hopes to hear from others in regard to medical centenarians,

as he would be glad to render his compilation as complete and accurate as possible. Communications addressed to him, M. L. Picard, care *Gazette Méd. de Paris*, 93 Boulevard St. Germain, VI, Paris, will be thankfully received. He cites his authorities in detail, with extracts.

HOW THE HAIR TURNS WHITE.—Metchnikoff's observations (*New York Medical Journal*) appear to show that the atrophic process, whereby canities ensues, is due to the intervention of uninuclear phagocytes. These cells are situated primarily in the medullary portion of the hair shaft, but make their way onward to the cortical layer, where they absorb the pigment granules and remove them from the hair. A great number of these phagocytes may be found in the roots of hair which has only partly turned white. The occasional phenomenon of the hair turning gray in a single night is to be explained by the phagocytes being endowed with greatly heightened activity.—*Denver Medical Times*.

FURTHER GIFTS TO THE HARVARD MEDICAL SCHOOL.—In his speech at the commencement exercises of Harvard University, President Eliot said: "This year our treasurer reports that the cash addition to the property of the college is \$1,300,000. Of that sum \$500,000 consists of contributions to the great undertaking of the medical school. And that leads me to speak of this particular direction of the beneficence of the friends of the university—for medicine. More than \$2,000,000 have been attracted to the medical school undertaking. The money comes easier there than anywhere else. What is the reason? It is directed in this way by the profound sense of gratitude of many men and many women for the service which medicine has rendered to them, to their children, to those dear to them. It is directed in this way by the conviction that many more discoveries and unimagined blessings are coming out of medical study into the service of the world. This very day there have been added to the funds provided for the medical school undertaking \$285,000. And both

gifts—there are two—come charged with the most sacred purpose to do good in this world.”—*St. Louis Medical and Surgical Journal*.

IMMACULATE CONCEPTION IN THE XVI CENTURY, AND THE WILES OF THE MATRONS THEREOF.—*The Gazette hebdomadaire des Sciences médicales de Bordeaux* recalls a matter of interesting conjugal history in the following decree of the Parliament of Grenoble, February 13, 1537.

“Considering the evidence showing that it is more than four years since the said Lord of Aiguemère has carnally known the said Lady of Auvermont; considering the defense of the said lady, declaring that, although she has not carnally known her husband, yet having imagined in a dream the person and contact of the said Lord of Aiguemère, she experienced the same sensations of conception and pregnancy that she might have received in his presence, and affirming that, since the absence of her husband, for four years, she has never had an intercourse with any man, and that she has nevertheless conceived and born the said Emmanuel, which she believes to have come about by the force of her imagination; considering the deposition of the Ladies of Albriche, or Pontrinel, of Orgeval, etc., affirming that such an accident may happen to women; that such things have happened to themselves and that they have conceived children of which they have been happily delivered, which resulted from certain imaginary intercourse with their absent husbands, and not from copulation; considering the attestation of the midwives and of the physicians; the court decrees that the said Emmanuel is and shall be declared the legitimate and true heir of the aforesaid Lord of Aiguemère, and charges the appellant to hold the said Lady of Auvermont as his wife in estate and honor.”

“ORAL HYGIENE IN PUBLIC INSTITUTIONS” has been recommended by the “National Dental Association,” at the recent meeting held at Asheville, N. C. We cordially endorse the recommendation, as we do the teaching

of hygiene generally in all schools, beginning with the kindergarten. When oral, mental and physical hygiene shall be generally inculcated in the minds of children we shall develop a better people, strong in all of the essentials of a strong and just and great government.

HARMFUL DRUGS IN PROPRIETARY MEDICINES.—

That many widely advertised and generally used medicines depend largely for their action on morphin and similar drugs is charged by Dr. J. B. Mattison, of Brooklyn, N. Y., in *The Medical News* (April 4). Dr. Mattison warns us against what he asserts is "the danger involved in the lawless sale—lawless because not safeguarded by law—of the many nostrums in which morphin and cocain play the largest part for harm." He goes on to say:

"As a nation largely neurotic—both ancestral and acquired—we offer an inviting field to venders of such wares, who ply their trade with a vigor worthy a better cause, and the result of which we must make note if we would conserve the best interest of many whose well-being is given to our care. It goes without saying that the larger, by far, number of the many nostrums—nervines, anti-neuralgic pills, powders, tablets, and liquids—so much heralded and lauded for relief of pain and nervous unrest, have morphin as their active part. And this 'part' in some is not small. In one, largely advertised, there is one-eighth grain in each teaspoonful. The risk of morphinism, in certain persons, from that amount is large; in fact, a smaller, in a highly nervous patient, on whom it acts kindly, will create the disease. A ten-years' case of morphinism, under my care, seven years ago, had its rise in a one-sixteenth grain daily dose.

"Even larger risk of inebriety obtains in using the various nostrums containing cocain, so much lauded for the relief of coryza and other nasal ills. In the form of catarrh snuffs and solutions, its power for harm is far greater than when taken by mouth; in fact it ranks almost—or quite—with its subdermic effect, by virtue of the highly absorptive nasal mucous membrane, and its nearness to the

brain, making its seductive power and ill effect on mental health specially prompt and pernicious. One of these nostrums contains $1\frac{7}{8}$ per cent. cocain—two per cent. is the strength often used for anesthesia—and any ‘cure’ having that amount is dangerous. Insanity is certain, if its use be continued.”

Dr. Mattison tells us that the abuse of cocain arising from its use in colds or catarrh is very common, and that many wrecks are the result. He concludes:

“Such the situation. What the need? This.

“An act making it illegal to sell morphin or cocain except per prescription, and the prescription not to be refilled, save by order of the attending physician.

“A law compelling the maker of every nostrum to print the formula on wrapper, and those containing morphin or cocain, the amount of the drug in each dose. America is behind the times as to what could and should be done to avert this ill. The American Association for the Cure of Inebriety can, and it is to be hoped will, make earnest effort along this line, and so effectively safeguard one phase of the public weal.”

Another and better remedy is a law with heavy penalties making the magazines and newspapers that advertise these pernicious drugs *particeps criminis* with the conscienceless advertisers and fully responsible for damages to health and life accruing from the pernicious conspiracy to filch and fell confiding, unsuspecting, suffering, gullible humanity that goes to the newspapers for medical aid.

THE NEW MCLEAN HOSPITAL.—*The American Journal of Insanity* makes some pat and pertinent remarks on this excellent institution and its work which we desire to forcefully present to our readers, as representing the advances in psychiatric study and management which characterizes this foremost, typical American hospital for the insane.

One great underlying principle, marking the contrast from earlier periods, is seen to assume prominence. This is the recognition of the paramount rights of the patient. The laws and administration which preceded the so-called

modern reform, were for the protection of the community, and, if necessary, the annihilation of the patient * * *

"Each year witnesses some advance in the interest of the insane person, for his comfort or treatment, and all engaged in this department of medicine now strive to obtain the most liberal interpretation of problems presented for their consideration."

"In reviewing what has been accomplished and in what direction energy is to be expended in the future, Dr. Cowles (McLean Hospital) reveals the inspiration of a great progress. We do not assert that Dr. Cowles has been alone in pointing the way, but the successful development of the McLean Hospital, under his guidance, has represented the tendency of thought, and has justified the liberal policy of the present day. The new McLean is the most complete departure from the monastery plan of institutions. Its separated houses were intended to appeal to the patient as a system the least removed from home life." * * *

"The community from which the hospital derives its support has responded, and each year the income and demand for accommodation increase without curtailing the admission of indigent people, who are regarded by an endowed hospital as proper recipients of its ministrations."

"Dr. Cowles has cultivated the admission of patients at their own request, and upon their own volition, and each year has seen an increase in the number thus seeking treatment, which now includes more than half of the admissions."

The feature of the report this year lies in its treatment of the scientific aspect of psychiatry. "In his earlier work upon fatigue, neurasthenia and the genesis of insanity, Dr. Cowles gave instructions in practical psychology which theorists in this department would do well to imitate. He accomplished a greater result in delimiting mental symptoms in a way to call for an investigation into their causes. This investigation is now under way. It is proposed to study technically the nutrition in health and disease, tissue metabolism, the blood and the excretions.

A laboratory of chemical physiology has been organized at the McLean, and is now in active operation. Of its work, under an expert in this line, Dr. Cowles writes as follows:" * * *

"During the past year this laboratory has been coming into the close relations with the clinical services long ago prescribed for it as likely to open a fruitful field in the study of bodily conditions associated with mental disorders." * * * "The problem to be dealt with here is very largely that of nutrition. The nutrition question is fundamentally a chemical one. It means not only observation and research in the physiology of digestion and its disorders, but investigations of the processes by which the tissues and cells exercise their power to feed themselves from the nutritive elements conveyed to them in the blood,—the processes by which the body makes over food materials into itself, uses them in work, and excretes the waste products. It is the disorders of these processes of metabolism that have a large part in the derangements of nutrition and the dependent functions of the nervous system; and it is to such derangements that disorders of the mental functions may be due in many cases. The methods of study involve the application of the latest results in the remarkable progress that is being made in physiological and pathological chemistry, and the precise chemical estimation of the food ingested and the excreta."

Dr. Folin has made a clear statement concerning his work in the following abstract:

"The most important work in this department during the year has consisted of metabolism experiments. Preliminary to this work, and going hand in hand with it, certain analytical operations, upon which depend the value of all metabolism investigations, have been tested as to their accuracy, and some new methods have been devised. One of these was Dr. Folin's "New Method for Determining Ammonia in Urine and other Bodily Fluids," which is now in constant use in the laboratory, and the paper has been published (*Hoppe-Seyler's Zeitschrift*, 1902). Mr. Shaffer, the assistant in the laboratory, has made careful historical

study of former methods for this purpose, and they were all found to be quite unsuitable for metabolism work; he has also devised a new modification of the "vacuum distillation method" which greatly reduces the time of the operation and yields accurate results. His paper is a well-written contribution "On the Quantitative Determination of Ammonia in Urine," and has been published (*American Journal of Physiology*, 1902). The method for determining urea, published from the laboratory last year by Dr. Folin, has been further perfected, and the objections raised against it disproved (*Hoppe-Seyler's Zeitschrift*, 1902); also the "Method for Determining Etherel and Total Sulphates in Urine" has been improved (*American Journal of Physiology*, 1902). A method has also been worked out by means of which the excess of mineral acidity and alkalinity in urine can be determined with comparative ease. The factor is of considerable importance in certain abnormal metabolic conditions; the method is not yet published. This analytical work is necessary, as was mentioned in last year's report, because of the imperfections that still render most analytical methods of clinical chemistry too inaccurate to permit the detection of even marked metabolic changes and pathological conditions, as indicated by variations in the excretions."

* * *

"Extended metabolism experiments were begun, and accurate analytical data are now being collected, which, it is hoped, will contribute to the question as to what classes of mental disease are, and what are not, due to disorders of metabolism. These experiments have consisted in keeping patients, for a short time, on a uniform, but acceptable diet of known nitrogen value, and carefully determining, quantitatively the forms in which this nitrogen is eliminated in the urine; the purpose is to learn whether any unusually large fraction of the nitrogen so eliminated appears in forms or in quantities, unknown to the normal nitrogen metabolism. The analytical investigations already made have helped very much to make this metabolism work more effective."

"The report is concluded with the remark that the

equipment of the chemical department is practically very complete; and chemical investigations can now be carried on in the McLean Hospital under unusually advantageous conditions. The only material want that is not fully met in this department is that of files of certain periodicals; some complete sets of these are yet needed for the frequent consultation that is required of the work of many other investigators in physiology and chemistry, whose progressive activity was never greater than at the present time, making convenient references to the newer and older literature of the subject, an important aid to present inquiry."

As the journal from which we abstract says: A field of great promise lies here, to compensate the disappointment on the results of years of section-cutting upon which too much energy has been lost, and we hope the institution may not lack for ample financial aid to prosecute so praiseworthy and profitable a work for science and the welfare of science and philanthropy.

TAPEWORM IN THE BRAIN.—A most curious case was recently made public in the course of an inquest on the body of a man who died in Pentonville Prison while undergoing a sentence of two months' hard labor. Dr. Syme, assistant medical officer, said that the deceased man was in good health when admitted, and was put on oakum picking. On his first serious symptom of illness he was removed to the prison infirmary and died suddenly on the following day. The case was a most unusual one. On examination, his brain was found to be studded with larvæ of the tapeworm. There were over fifty of these parasites, and they had worn away the skull. The tapeworm must have been generating for years. The eggs, which the deceased must have swallowed, were of canine extraction and were believed to have come from the dog. Death was caused by the larvæ of tapeworm, of which specimens were shown to the jury.—*British Jour. of Nursing*.

We should like to know how authentic the source of this remarkable statement is and how well verified it can be.

ANTI-TUBERCULOSIS AWAKENING.—The present year witnesses many organizations for the arrest and suppression of tuberculosis, all growing out of the assiduous work of the medical profession for the past several decades, in throwing light on the nature and perils of this insidious messenger of death and in pointing out ways to combat it.

There are to be two tuberculosis exhibitions this year, one at Baltimore and the other at St. Louis. The Baltimore exhibit was lately made under the auspices of the Maryland Tuberculosis Commission, the state board of health and the Public Health Association. Such an exhibit and organization should exist in every state.

This Maryland organization is conducted by 250 prominent medical and lay citizens. Charts, lectures, photographs, pathological specimens and lectures relating to the nature of consumption and its management by sanatoria and other hygienic measures characterized the recent work at Baltimore.

Another tuberculosis exhibition will be at the World's Fair in connection with the subsection Hygiene. This will show what can be gleaned in this country and abroad on the subject, especially the exhibits of the International Bureau for the prevention of Tuberculosis at Berlin.

Active work is being done by the visiting Nurse's Association of Chicago, a strong and efficient organization, well supported by medical and lay influences, male and female.

AN IMPORTANT MOVE in the direction of the suppression of Tuberculosis is the International Congress of Tuberculosis fostered by the World's Fair officers and the United States Government, to meet at St. Louis Oct. 3-4-5.

This congress is especially important because it is to be a medico-legal and popular congress, the first of its kind ever fostered by a Universal Exposition, in which the work of the medical profession is to be utilized and practicalized, it is to be hoped, in fruitful legislative and popular measures for the public welfare, in stamping out the great and subtle menace of the human race of tuberculosis.

Dr. E. J. Barrick, of Toronto, is President of this Congress and Mr. Clark Bell, an attorney of New York, is chairman of the committee on organization.

Another important American Congress is to follow in April, 1905, and an exceedingly important foreign congress will follow in September and October, 1905.

Dr. Henry D. Holton of Brattleboro, Vt., is president of the Congress of 1905, and the president of the Paris congress is Professor Brouardel.

Thus are the people and the profession becoming alive to the danger and duty of the hour.

It has been objected that the brightest lights in tuberculosis work are not shining conspicuously, but they have shown so long and so brilliantly in other days and in other places that the world is full of light and the pathway of public duty for medical man and layman is now clear enough for efficient work, so the average medical man and the layman and laywoman know what ought to be done in the premises. It now only remains for the profession and people to get together and strike the final finishing blow to this insidious demon of destruction.

A GREAT AND UNEXPECTED LOSS OF LIFE such as that of the late theatre fire at Chicago or the fatalities of a battlefield, attract public attention, arousing inquiry as to cause and prevention. But the remediable causes that are always killing, like the water and dust carried causes of death, are much more insidious but quite as certainly fatal. The bacilli infected dust of our city streets, for example, excites little concern and less comment. City legislators might atone for their own shortcomings and make vicarious amend for the boodle sins of their predecessors by keeping down the city dust, providing for better street sprinkling, washing and making a surety of clean dairies, pure milk, pure water and clean public houses, as well as safe exits from burning theatres and other places of public assemblage.

More people contract disease in the all-day closed and darkened theatres in one year, and slowly die, than would equal an annual holocaust like the late Chicago theatre calam-

ity. Cleanliness and purity of atmosphere in public places of assembly are next to Godliness for the good of the people.

THE PYROMANIAC, THE PYROPHOBIAC AND THE PYROPHILE are subjects requiring more expert psychological analytical power than belongs to the average neurologically untrained sleuth of the law. Neurologists who know what they ought to know of alienism, understand the difference between an incendiary and a morbid fire fiend or pyromaniac. The pyrophile loves to see fires and may or may not be vicious or insane enough to commit unlawful incendiarism in order to witness a fire. It is a common thing for people to run to fires with no other motive than to see them blaze and burn.

Such a case was recently displayed in the person of a Mascoutah, Illinois, citizen named Adam Dickhaut, who went to all of a series of fires in that town. This led to his actions being shadowed by a special detective and the spreading of the suspicion of his being the incendiary.

The pyrophobic who by reason of a past fearful experience with fire or of innate dread, fears flames and flees from them as the pyrophile likes to light them, see them and flee to them.

The pyromaniac may show some or all of these mental peculiarities but in more intense and aggravated form, with delusive speech or conduct or both added, revealing his mental disease. He not only loves to "light a taper at his neighbor's fire" but loves a bonfire and a great fire at his neighbor's or any one's expense, not excepting his own and rejoices "with maniac glee" at any kind of a fire, anywhere and at anyone's expense and at any consequences of life and structure. He is a morbid fire worshiper, a brain disease impelled mad lover of blazes.

The brains of detectives should be built of the best stuff that men are made of, judicial brains, that formulate conclusions after all possible knowledge is secured and not theories based on the first and most superficial facts and made in their "fancies wanderings" by logical violence to conform to all other possible circumstances that may come

to hand. Appearances are so often deceptive even to a brilliant detective.

Adam Dickhaut of Mascoutah, Ill., lately (Dec., 1903,) went to a death of chagrin and suicide and his last words were "I did not light those fires," though he had been present at all of them.

He left a note in which he said that if he were guilty of setting fire to the buildings, he would never kill himself, but would fight the matter through, but the fact that he knew that he was innocent and that he felt so badly that people who had pretended to be his best friends were the ones who were throwing the suspicion on him, and had made it appear that they wanted him punished for something he had not done, caused him to conclude that life was not worth the living.

He said: "I want to leave my curse for the busybodies of this town who have destroyed my reputation and driven me to this end."

The detectives who were working on the case claim that they followed a number of clews, but that they could only reach the conclusion that Dickhaut was aware of how the fires started.

Friends of the Dickhaut family state that they do not think the deceased had anything to do with the fires, and that enemies of Mr. Dickhaut gave information which led to the deceased being suspected.

The residents of the town are of the belief that there was more than one person implicated in the starting of the fires, and they point out that should Mr. Dickhaut have known anything about the affair he would, at least in his last letter, have pointed out the guilty parties in order to remove any suspicion from his family that might remain.

He was thought to have been of unsound mind for some time.

THE DANGEROUS PERAMBULATING PARANOIAC continues to peregrinate in public places, without expert chaperonage and because of this neglect of official espionage of such unsafe persons when on the streets, a valuable and

venerable citizen, Andrew H. Green, the father of Greater New York, was shot and killed at the door of his home, 91 Park Ave., New York. His murderer was an insane negro, Cornelius Williams by name, who deludedly thought this old man, aged 81 years, had instigated imagined slanderous speech of a negro woman against Williams. Under delusions of suspicion the deed was done, for Mr. Green did not know the negro woman and had never had a colored servant in his house.

Some day when psychiatry shall be more generally taught in medical schools and health boards and people know more about the uncertainty and treachery of the insane mind, perambulating paranoiacs dominated by morbid egoism and delusions of suspicion will be chaperoned on the streets or restrained from violence. Psychic sanitation is essential to public safety as well as physical.

With the usual self-satisfaction of the insane homicide, this victim of mania persecutoria said:

"I shot you. You got what you deserved."

Here is an insane man who shows himself familiar with the nature and quality of the act which the law still holds to constitute sanity in some states.

THE RETURN OF KRATZ on requisition honored by our friend, the Mexican Government, is a much appreciated act of sanity and comity on the part of His Excellency President Diaz, but Kratz's speech on the way back and since his arrival are suggestive to the alienist, of impending paresis.

Paresis begins with morbid egoism. The parietic boodler is always, in his own esteem, the biggest boodler in the bunch. The parietic, whether morally good or bad, always assumes a great and high pedestal role and feels good and confident and exalted out of harmony with the warrant of his surroundings. This man is either sure of his innocence or boasting to keep up his courage, or paresis is coming to him.

EROTOPATHY AND MORBID EGOISM in that form which esteems itself master and possessor of any creature

on which erotic passion is concentrated, reveals itself in some form of dominance and often in destruction of the object of their "devoted attachment." The almost daily love murder is the result, of late, as the public press reveals.

The evolution of those neuropaths is brought about through an organism inclined by heredity to instability and fostered into further instability by inadequate brain rest and perverted control through childhood and youth coupled with the forcing and cramming educational process of modern school life, regulated by pedagogues and ambitious parents, ignorant of the brain's capacity and the conditions of its strong, stable, normal development.

The product is a self-conscious willful egoist and when love dominates it, it does its own sweet will and some one in the way of it yields or gets out of the way or dies. These unstable willful creatures are the products of bad education, bad training and a bad heredity. Some of them, when active disease of the brain is brought on, are insane. All of them for lack of self-restraint and training have weak inhibitory centers of brain impulse regulation. The mothers and fathers of some of them should either not have been born or having borne these morbid impulsives, should have wisely regulated and restrained their lives, and their teachers like wise should have aided. American habits of lax restraint of children at home, in school and in public, are developing too many unstable neuropaths and among them are these erotopaths.

This nation is sewing neuropathic winds which will, if not checked by more intelligent understanding and building of its brains, reap for it psychic whirlwinds of destruction. Neglected and misdirected and unrestrained neurones have cyclones of psychic wrath and ruin in their pathway.

TWO NEW SANITARIUMS in different sections of the country are introduced in the advertising pages of this number and commended to our readers. One, the Waukesha Springs Sanitarium, conducted by Byron M. Caples, M. D., Waukesha, Wis., as Superintendent, and the other, by Dr. W. B. Fletcher, Indianapolis, Ind.

The superintendents of these institutions have had, respectively, adequate experience in the management of mental and nervous disease and their respective institutions are specially well designed for the management and treatment of nervous and mental cases. The gentlemen are both up to date in capacity as their institutions are in appliances and accommodations.

THE PSYCHOLOGY OF THE DECOLLETTE DRESS has attracted the attention of the Pope. He appears to see the low neck gown at celibate receptions in about the right light, but the gowns will continue to be cut low in the neck, so long as women continue to "come out" in society, and that will be forever.

A BLUSHING SCALP; OR, A CEREBRAL VASO-MOTOR REFLEX IN A GAME OF CARDS.—The influence of a game of poker on the vaso-motor system is illustrated in a story in the *Post-Dispatch*, St. Louis, Nov. 29th, between the governor of Missouri and another state official, though this lesson in neuro-vascular physiology was not the object of the story.

"Hanging on the wall, back of the chair was a small mirror. The governor of Missouri kept one eye on the mirror and one eye on his hand.

"The hand of his adversary was not revealed in the mirror, but the back of his head was.

"And the back of his head was bald.

"The bald spot on the back of the official's head was his weak spot. His face never betrayed his emotions, but the bald spot always did.

"When he had a good hand the spot blushed prettily. When luck was against him the spot grew pale."

The governor of Missouri watched the spot and won the game.

Doctor Dockery, governor of Missouri, knows the value of a flush vaso-motorially and otherwise.

THE MEDICAL PROFESSION AND GENERAL WOOD.—The medical profession of the world, and especially of the

United States is gratified at the Senate committee's vindication of General Leonard Wood, as it was pleased to see his soldierly and manly merits recognized by Presidents McKinley and Roosevelt, notwithstanding he was once a doctor of medicine.

The doctors of medicine in the United States have a kind appreciation of Mr. Roosevelt's good opinion of medical men as manifested on another memorable occasion.

He may not understand the negro and the southern sentiment in relation thereto so prudently and so well as the long lamented Lincoln, but he certainly comprehends and values the medical profession and its higher type of men, far better than some presidents, notably poor unfortunate and sadly mourned Garfield, who risked his life in the hands of a cundurango crank quack cancer curer.

The medical men of America will not forget Roosevelt's high tribute to the medical profession.

DOCTOR NEILS FINSSEN, who has already won a wide reputation for his success in curing tuberculosis and cancer by powerful electric light, discovered his method of treatment in 1895, about a year before the discovery of the Roentgen rays. The Finsen Institute in one of the suburbs of Copenhagen, has become one of the most noted places in Denmark, and hundreds of patients have been treated there with success.

The patients of the institute are placed in reclining chairs and the powerful light is focused upon them through a series of lenses and screens. This light, of remarkable brilliancy and power, destroys the disease germs.

Doctor Finsen has devoted himself to his work so constantly that his health has become seriously shattered, and even a year ago he openly declared he did not expect to live long. His chief ailments are dropsy and heart disease. Despite his condition, Doctor Finsen has continued his work of relieving suffering. He is still a young man.

THE THIRTIETH ANNUAL MEETING of the Mississippi Valley Medical Association, will be held at Cincinnati, O.,

October 11, 12, 13, 1904. Dr. B. Merrill Ricketts has been elected Chairman of the Committee of Arrangements.

Officers for 1904: President, Edwin Walker, M. D., Evansville, Ind.; President-elect, Hugh T. Patrick, M. D., Chicago, Ill.; First Vice-President, Bransford Lewis, M. D., St. Louis, Mo.; Second Vice-President, Geo. W. Cale, Jr., M. D., Springfield, Mo.; Secretary, Henry Enos Tuley, M. D., Louisville, Ky.; Assistant Secretary, S. C. Stanton, M. D., Chicago, Ill.; Treasurer, Thos. Hunt Stucky, M. D., Louisville, Ky.

The following resolution was adopted by the body:

Resolved: That it is the sense of the Mississippi Valley Medical Association that measures be taken by Boards of Health, Boards of Education and School authorities, and where possible, legislation secured, looking to the examination of the eyes of all school children, that disease in its incipency may be discovered and corrected.

MEDICAL PRESS EXHIBIT AT ST. LOUIS.—A recent communication from Dr. Charles Wood Fassett, editor of the *Medical Herald*, St. Joseph, Mo., is the following:

"I have secured adequate space at St. Louis, in the palace of Liberal Arts, with a view to making a display of American medical publications which shall be commensurate with the importance of this class of work, and earnestly solicit the coöperation of editors and publishers of medical journals. Decisive action must be taken at once. The expense necessary to make this exhibit will be nominal. There is no charge for space, and I believe that the Department of Publicity will assist us in maintaining an up-to-date and comprehensive exhibit, where files of current issues of every medical journal in the land may be found during the progress of the great fair.

"Full information will be furnished later, and all medical journalists are urged to communicate at once with me with a view to united action and early endeavor, so that additional space may be secured, if necessary, to accommodate all who desire to join the bureau." The medical press and medical profession owe Charles Wood Fassett a vote of thanks

for his interest and energy in their behalf at the world's greatest of universal expositions in the world's history of such enterprises.

HERBERT SPENCER, perhaps the greatest thinker and writer of the present age and of the Victorian era, died in London on December 8, aged 83 years. Herbert Spencer was known and honored in every portion of the globe. It was at Mr. Spencer's visit to America in 1882 that he proclaimed himself the apostle of relaxation. "We have had too much of the gospel of work," he said. "It is time to preach the gospel of relaxation." Mr. Spencer lived up to his own gospel. Ever since 1860, when his "Conditions of Human Happiness" appeared, he worked only three hours daily. With three hours of work a day at dictation he constructed his "Synthetic Philosophy." Besides the latter, his principal productions were Principles of Biology, of Sociology, Psychology, and First Principles.

WILLIAM MATTHEW WARREN.—Died in Detroit, November 11, William Matthew Warren, general manager of the pharmaceutical house of Parke, Davis & Co., of Detroit, Mich., at the age of thirty-nine years. He entered the service of Parke, Davis & Co., at the age of seventeen, and at thirty-two became the manager of the great and popular firm, the first of its class and kind in the country. Mr. Warren, through his successful conduct of the affairs of this vast concern of the Northwest, achieved the title of a Napoleon of administration.

The death of Mr. Warren is a great loss to Parke, Davis & Co., and to a large concourse of friends, and he had troops of them. He blended geniality with ability to a marked degree and was as warm and true in his friendship as he was zealous and great in his work.

CRYSTAL SPRINGS, formerly Mt. Tabor Sanitarium. Dr. Waldo Coe announces the above change of name and the enlargement of his Medical Board by the addition of Dr. Wm. T. Williamson to the medical directorship, also

additions and improvements. Springs of valuable water are found on the East Lynne tract, adjacent to the Sanitarium grounds which have just been acquired by the management of this meritorious and justly esteemed sanitarium known to the entire profession of the Pacific Coast. This institution and its able medical officers have the unqualified endorsement of this journal. Those who can avail themselves of its benefits will thank us for commending it.

DR. E. C. RUNGE, Superintendent of the St. Louis Insane Hospital, has resigned to take effect February first proximo. Dr. Runge was an enthusiastic, energetic and capable student of psychiatry and made an efficient superintendent.

Dr. H. S. Atkins of St. Louis has been selected as the new superintendent to succeed Dr. Runge. Dr. Atkins carries with him to the duties of his new position four years clinical experience in psychiatry in the Eastern Kentucky Hospital for the Insane and ten years of general practice experience, and general good medical repute, all of which contribute to the essential qualifications of the good hospital superintendent.

MEDICAL CONVENTIONS AT THE WORLD'S FAIR.—Between May and December St. Louis is to have the National Medico-psychological, the Neurological, the Gynecological, the Military Surgical Association, the International Tuberculosis Congress, a medico-legal and peoples Congress to devise ways to practicalize medical suggestion in the suppression of the great White Plague.

SAUNDERS' AMERICAN YEAR-BOOK for 1903 should be on the library shelf of all who have the year-books of preceding years or who may contemplate the year-book of 1904, soon to appear. This book like all others of this progressive publishing house is up to date in its contents.

BIOPLASM AS A TISSUE BUILDER appears to have come amongst us to stay, as one of the mainstays of neurone reconstruction. While not prepared to make a

final and definite report upon its merits in Neurotherapy, we are satisfied that it has sufficient value as a tissue rebuilder in brain strain and neurasthenic states to justify its employment. Its production is another of the signal triumphs of scientific chemical therapeutics.

PARKE, DAVIS AND COMPANY'S NEW MANAGER. Notwithstanding the painful surprise and regret of the medical press at the untimely demise of Mr. Warren, it is gratifying to know that this well-known firm has found so capable a successor in Mr. E. G. Swift as General Manager. Mr. Warren's mantle has fallen on worthy shoulders.

DR. WILLIAM W. IRELAND, author of "A Blot upon the Brain," "Through the Ivory Gate," etc., has been engaged for about two years on a life of Sir Henry Vane and the Republican of the Commonwealth. The work is now approaching completion.

"FEW MEN have weak eyes from looking upon the bright side of life."—*Maine Journal of Medicine and Science*. Our Hospital readers will find a good article on the acid treatment of typhus in this excellent journal.

THE TRAINED NURSE is coming to the front in the endorsement of Patent Alcoholic Medicines and in the description of patients' conditions. See those promoters of publicity, the daily papers.

THE AMERICAN CARTOONIST is worth all they ask for it and they modestly ask all they can get to help entertain the funny picture artists visiting the World's Fair.

THE WEIGHT OF GEORGE FRANCIS TRAIN'S brain, it is said, was 53.8 ounces. Train's age was seventy-five years at the time of his death.

SELECTIONS.

CLINICAL NEUROLOGY.

RISE OF BLOOD PRESSURE IN LATER LIFE.—Under the above caption Clifford Allbutt has discussed in a most interesting and suggestive way, the phenomena attending old age and even middle life, and offers deductions regarding its preventive and remedial treatment.

This rise of blood pressure, which is commonly attributed to the anatomical condition known as arterio-sclerosis is divided by the author into three classes:

“1. *The Involuntary*.—Common to old people, often hereditary, not necessarily or usually associated with rise of arterial pressure; the nature of which intrinsic or extrinsic, is unknown, but does not lie in high living. This kind may be vaguely referred to the faltering rheums of age.

“2. *The Mechanical*.—The result of long persisting high blood pressure of whatsoever origin.

“3. *The Toxic*.—Resulting from such causes as bad alcohol or syphilis; usually met with in younger persons in some of which the pressure rises, in others not.”

It will be noted that according to Allbutt's view, the first deviation from health is increased blood pressure which often exists independent of arterial disease, and is consequently readily amenable to treatment.

While the use of alcohol may exert a slight predisposing influence, the chief factor is considered to be high living with too little muscular exercise. As the author states: “The ordinary man must be warned, as he passes the age of forty, to keep up muscular exercise in the fresh air and to control his appetite.” The faulty products of

digestion when imperfectly oxidized no doubt exert a strong influence in the production of rheumatism, gout, kidney and circulatory lesions and the present conditions of life certainly invite those evils which we seek to avoid. Only by the sweat of his brow shall man eat his bread, in safety. —*Editorial N. E. Medical Monthly.*

A SEPARATE CENTER FOR WRITING.—Gordinier (*Am. Jour. of Med. Sci.*, July, 1903) reports the following case of brain tumor, to prove the existence of a special writing center. An intelligent woman, age thirty-five years; headache, vertigo and gradually failing vision; no disturbance in speech. Optic neuritis of both eyes; no paralysis or atrophy of extremities. Recognition and names of objects perfect; speech normal. Total inability to write, although she understands perfectly written language and can read to herself aloud. She cannot write voluntarily nor form correctly a single letter, and cannot write from dictation or copy. She holds the pen in a perfect manner, and performs with it as if to write. Her writing consists of nothing more than a series of united curves. The diagnosis of brain tumor was made, and an operation performed, from which she died. Post-mortem showed a rapidly growing glioma occupying the foot of the second frontal convolution. The case seems to prove the existence of a separate and distinct cortical center for writing, having the same relation to writing movements as the motor speech center has to speech movements. This center is located at the base of the second left frontal convolution for the right handed, and possibly in the same location in the right hemisphere for the left handed. Destruction of this center produces pure motor agraphia without aphasia or paralysis of either arm.

ABIOTROPHY.—By this term W. R. Gowers in the *London Lancet* refers to degeneration or decay in consequence of a defect in vital endurance. Illustrations of this are seen in baldness and early grayness of the hair. The muscular system shows similar changes, which we include under the general name of muscular dystrophies. Here,

the fiber after development ceases to maintain its full nutrition; it wastes and ultimately perishes, while the connective tissue between the fibers takes on an overgrowth. The nervous system pre-eminently shows these "abiotic" changes. They are seen in such conditions as anterior poliomyelitis, spastic, paraplegia, the optic nerve degenerations, Friedrich's disease, etc. The general object of the paper, says the author, is to call attention to the two forms of death, somatic death against which we ever strive and which we endeavor to postpone as long as possible. The other aspect of death—the termination of life of isolated structures in the body—is to us what we call disease. It does not of necessity involve the termination of general life, but it is not less to be striven against, although the strife must often be in vain. The discernment of these diseases which we may call "abiotic," the recognition of the symptoms, the course, and the conditions which indicate them are of extreme importance. We must endeavor to check their progress, for we seldom know the strength or feebleness of the tendency, or whether it can be hindered, but the discernment of the nature of these maladies will often enable us better to perceive why treatment fails, and it may save from useless prolongation of attempts to perform the impossible.

ADRENALIN IN THE TREATMENT OF THE CARDIAC TOXEMIA OF PNEUMONIA.—Henry L. Elsner, M. D., (*New York Medical Journal*, Jan. 2, 1904), directs attention to the appalling mortality of pneumonia due to the resulting cardiac toxemia. The prime factor in this disease is a toxemia with obstruction in the pulmonary circuit, leading to cardiac asthenia. Marked changes occur in the right half of the heart, with far-reaching degenerative changes in the muscle, heart-clots, and vasomotor paralysis.

Three remedies meet the indications presented by the circulatory changes due to paralysis of the vasomotor centers, the dilated condition of the arteries and the weakened heart. These are strychnine, digitalis and suprarenal extract or Adrenalin, its active principle. Adrenalin acts on

the heart and blood vessels favorably; it does not act on the vasomotor center. Hence, it may be used to assist strychnine. When the vasomotor center is exhausted and blood pressure study proves the inefficiency of strychnine, Adrenalin may still be administered, and, in some cases which seem unpromising, when compared with the method of stimulation about to be suggested, we may carry the patient beyond the critical period to a safe recovery. Suprarenal extract, or Adrenalin, has seemed to the author to act as a needed food in all infections where there is danger of myocardial degeneration. He reports a case of pneumonia, in a woman, the mother of five children, in whom it had been impossible to raise a continually lowering blood pressure with strychnine. The systolic blood pressure was almost immediately raised by the repeated administration at short intervals of fifteen minims of a one to one thousand solution of Adrenalin hypodermically, and the patient was saved. This treatment is applicable as well to the toxhaemic states of other nerve centers.

STOKES-ADAMS DISEASE.—In spite of the fact that this remarkable clinical condition was described by Adams in the Dublin Hospital Reports as early as 1827 and much more fully by Stokes in his article entitled, "Observations on Some Cases of Permanently Slow Pulse," in the *Dublin Quarterly Journal of Medical Science* in 1846, too little attention has been paid to it by the profession at large—so little noticed, indeed, that many good practitioners of today scarcely know what is meant by the term.

The disease, or rather symptom complex—for the anatomic lesions are not constant nor the etiology uniform—is, however, by no means an infrequent one, and it is characterized by a group of symptoms which permit it to be easily recognized. The patient suffers from attacks of syncope, often described as "apoplectic attacks," associated with a very slow pulse rate—28 or 30 beats to the minute. The slow pulse may be due either to true or false bradycardia; occasionally there may be complete cardiac arrest for as long as half a minute, after which the heart again

begins to beat. Accompanying the more severe attacks there is usually marked involvement of the vasomotor system, revealed by pallor, vomiting and sweating, and sometimes by numbness and tingling—symptoms resembling closely those which occur in angina pectoris.

The nervous features of the disease are those which are most troublesome to the patient, and concerning which he consults a physician. Complaint is made of attacks of dizziness and staggering without known cause, or there may be sudden “fainting spells” with complete loss of consciousness. In some instances the symptoms resemble closely an attack of apoplexy; there is deep coma with loud, stertorous breathing and facial congestion, but the pseudo-apoplectic nature of the attack is shown by the absence of consecutive paralysis. Occasionally actual epileptiform seizures occur.

Three groups of cases are distinguished: 1. A post-febrile group; 2, a neurotic group, and 3, an arterio-sclerotic group. By far the majority of the cases met with belong to this third group. The pathology of the affection is as yet quite unknown. The cases are largely confined to the period of advanced life, though occasionally a young individual is attacked. The prospect of recovery, once the severer nervous symptoms have appeared, is unfavorable. The attacks may go on occurring, however, for years. Death is, as a rule, sudden in one of the seizures. The most that can be done in the way of treatment is to attempt to prevent the progress of an underlying arteriosclerosis when that exists. In the syncopal attacks nitrite of amyl may be used.

Stokes-Adams disease has in recent years begun to attract the attention of a number of the ablest clinicians in this country and abroad, and it is to be hoped that we shall ere long have new light thrown on its etiology and pathogenesis. Among the more valuable articles dealing with the subject are those by Huchard in France, Hoffmann in Germany and Osler and Edes in this country.—*Jour. A. M. A.* Oct. 17, 1903.

ANXIETY NEUROSES.—William B. Noyes, collaborating for *Med. Rev. of Rev.*, analyses P. Hartenberg’s article in

Archives du Neurologie, May, 1903, as follows: The chief symptoms are: General irritability, which makes the patient uneasy, excessively sensitive to all impressions, particularly to those of sound, to such a degree that he often suffers from true auditory hyperæsthesia. A habitual state of anxious expectancy, in which the patient continually feels menaced by some impending calamity. Crises of acute anxiety, in which the habitual state of anxiety is associated with such organic disturbances as palpitation, dyspnœa, drenching sweats, colic and tenesmus. Equivalents of the crises, represented by paresthesias, night terrors, tremor, muscular spasms, vasomotor phenomena, variations in general nutrition, phobias and obsessions. The essential feature is chronic anxiety with acute exacerbations.

CONVULSIVE TIC WITH COPROLALIA.—Dr. H. Morell of Litchfield, Minnesota, reports (*Med. News*, Dec. 5, 1903,) the case of an 18 year old man with good nervous history who when twelve years old noticed that the muscles of his face would twitch. This twitching would come on very suddenly and involuntarily. The spasms gradually became more violent and extended to the muscles of the neck to the shoulders and down both arms, which twitch violently and simultaneously. Two years later the lightning contractions of the muscles of the face were accompanied by a noise which resembled "hum" and "whoa;" these were alternated with a peculiar cry or bark at the top of his voice. Try as he might he could not control them. The patient has been in this condition for the past six years. If any unusual excitement occurs the barking is almost continuous. He says he is a nuisance to himself and everyone who comes within the range of his voice. It matters not where he is, on the street, in a shop or in a theater—he barks incessantly and at other times uses nasty language. He is an attraction wherever he is on account of his peculiar bark or cry and the distressing uncontrollable facial contortions with loud spasmodic sniffing. In regard to the treatment this patient has been given almost every drug recommended for this condition; in addition various therapeutic measures have been used as bath, electricity,

massage, etc. He has gone the rounds of the hospitals and various practitioners have treated him and the result has not been encouraging. When he presented himself Dr. Morell placed him in isolation and gave silver nitrate in increasing doses. After having been on this treatment for about three weeks the coprolalia had entirely left him and the tic was diminished somewhat. After two months of isolation the barking did not return until a fire occurred in the vicinity of the hospital, when the coprolalia and loud noises returned which lasted a week or so. The patient was in isolation for eight months. During that time he seemed to improve but after that when he started to go out occasionally the symptoms gradually returned. Since his return to public life the disease seems uninfluenced by the treatment given.

NYCTURIA IN CARDIO-VASCULAR AFFECTIONS.—M. Pehu holds, *Revue de Med. (Med. Record)*, that in a large number of subacute or chronic affections characterized by temporary or permanent involvement of the heart, the normal rhythm of urinary elimination is modified, the excretion being more active at night than during the day. This symptom is found not only in diabetes and scleroses of the urinary apparatus, but also in diseases affecting the systemic or the portal circulation. It would appear to be due to insufficiency of the myocardium in eliminating fluids ingested during the day, which remain in the tissues or blood. During the repose of the night, as arterial pressure is raised, watery excretion is produced. According to this theory, nycturia is a sign of cardiac weakness and will assist in the diagnosis of insufficiency of the muscle when there is no frank asystole. The occurrence of this symptom will suggest certain methods of treatment, especially the reduction of fluids ingested.—

CEREBRAL WOUND RIVALING THE PHENEAS P. GAGE CASE.—Dr. Walker Keate, Nacozari, Sonora, Mexico, gives (*Med. Rec.*, Oct. 17, 1903) details of an accident near his place, on May 18, 1903. A miner, age 40, was preparing to spring a hole with dynamite, in which he had

6½ sticks of giant powder inserted. They accidentally exploded while his face was over the hole. When Dr. Keate reached him two hours later, pulse 30 per minute and very weak. Eyes were blown out; skin and muscles and forehead were partly off; with the anterior portion of the skull cap turned back over the parietal bones. Orbital plate of frontal bone (roof of orbit) was blown into the brain, and the brains exuded through opening into cheek. A hole was in frontal bone about size of a silver dime—located at about center of frontal—through which brains exuded. Brain membranes—dura and pia mater and arachnoid—as also frontal lobes of brain, were badly lacerated. End of nose was badly cut; face and lips badly burned with powder and literally filled with small rocks and dirt.

After trephining to make a larger opening and to smoothe ragged edges, the doctor removed from the brain twenty small stones and several pieces of bone besides considerable dirt. Most of the foreign bodies were located at a point corresponding to anterior fontanelle, deeply buried in the brain. A large piece of bone corresponding to roof of orbit was extracted from brain through opening in forehead.

Amount of cerebral matter which exuded, weighed an ounce, but the patient has never for one moment been unconscious. His mind has been perfectly clear. He readily recognizes his friends when they speak to him, answers questions intelligently and describes accurately the details of the accident. He has never complained of pain, and says the anterior portion of the head feels paralyzed. Appetite is and always had been fairly good.

During the first two weeks, his temperature ranged between 100° and 103°; but during the last two weeks, it has been practically normal. Patient has been able to get up every day since the accident, and locomotion is good. Just a month after the accident the patient was sitting in a rocker on the porch in the fresh air, chewing tobacco. Both eyes are completely destroyed.—*Virg. Med. Monthly.*

PROGNOSIS AND CURABILITY OF EPILEPSY.—W. A. Turner (*Lancet*, June 13, 1903) reports the results of his

investigations of the prognosis and curability of epilepsy. His conclusions are derived from the study of 366 cases of genuine idiopathic epilepsy which had been under constant observation and treatment for 2 years. He believes that a family history of epilepsy will be found more frequently amongst those who have become confirmed epileptics, but a hereditary history of epilepsy does not necessarily militate against the prospects of arrest or improvement of the disease in any given case. The age at the onset of the disease has an especial bearing upon the prognosis. The most unsatisfactory cases are those in which the disease commences under 10 years of age; they show the smallest percentage of recoveries and the largest of confirmed cases. If the disease arises between 15 and 20 years of age an almost equal percentage of arrested and confirmed cases may be expected. The greatest percentage of confirmed cases is found amongst those in whom the disease begins between 25 and 35 years of age, from which time onward there is a steady increase in the expectations of arrest and diminution in the number which become confirmed. The duration of the malady influences the prognosis to the extent that arrest or improvement is much more likely during the first 5 than during the second 5 years. Cases, however, may be arrested even after a duration of from 20 to 30 years. The greatest percentage of confirmed and the lowest percentage of arrested cases occur in those epileptics who are subject to daily or weekly attacks, while conversely the smallest percentages of confirmed and the highest of arrested cases occur in those whose fits are as infrequent as once or twice a year. The character of the seizures influences the prognosis to the extent that the major attacks are the most tractable; then follow combined major and minor seizures; and lastly, the minor attacks occurring alone. Marriage exerts little, if any, influence upon epileptic fits. Some patients are relieved and others are made worse. In the majority of cases the disease remains unaffected. Pregnancy has little influence upon the seizures; at the best there may be only a temporary respite. On the other hand, the puerperium would seem to be especially favorable for the recurrence of fits; while lactation

also is not without an exciting influence in their production. The common incidence of epileptic fits is an irregular periodicity. There are types, however, which have been described as "increasing" or "decreasing," according as the fits increase or decrease in number in a definite period of time or in which there is a shortening or lengthening of the intervals between the fits. A case of increasing type may by treatment be converted into one of the decreasing variety. Long remissions, induced either by successful treatment or from spontaneous cessation of the fits, sometimes lasting for several years, are not unusual in epilepsy; they are of favorable prognostic value but are not synonymous with a cure of the disease. From the collected statistics a period of remission for at least 9 years has been fixed as the basis upon which a cure of epilepsy may be established. With this definition of a cure the author regards 10.2% of epileptics as curable. There are some cases of epilepsy which may be regarded as belonging to a curable type of the disease. These present little or no mental impairment, notwithstanding that fits may have existed for a long period. In the cases in which arrest took place cessation of the fits occurred within the first year of continuous treatment in over 50%.
—*Peterson, Pearce and Peters' Abstracts Int. Med. Mag.*

AN EXTREME CASE OF BRADYCARDIA.—L. E. Norfleet, Tarboro, N. C., reports (*N. Y. Med. Rec.*, Nov. 21, 1903) a case where the pulse rate rarely exceeded 45, and was intermittent. On one occasion it fell to 30 per minute. This, however, was not the lowest. He had a paroxysm of convulsion in the midst of which the pulse intermitted so much that the rate averaged only 8 to 9 per minute. Points of especial interest about the case in the author's opinion are (1) that any one should live and remain cool and conscious on an intermitting pulse of 8 to 9 per minute, and this for 24 hours; (2) that the drugs suggested by the text books—alcohol, strophanthus and belladonna, not only did no good, but actually did harm; (3) the strict localization of the convulsive seizures to the head and neck, and the general pallor of patient's face as well as the failure of the

cranial arteries to show any pulsation, made the author regard seizures and irregular heart action as a species of epilepsy, due to anemia of the brain centers, hence the use of morphin and nitroglycerin, which were successful.

CONCERNING PORENCEPHALY. (*Ueber Porencephalie.*)—(Kellner. *Monatsschrift für Psychiatrie und Neurologie*, Band XII, Heft 6, December, 1902.) In the institution for epileptics and feeble-minded at Hamburg, Kellner found twenty-one pupils with the characteristic symptom complex of porencephaly—namely, coincidence of epilepsy, psychic defect and hemiplegia, combined with defective development of the paralyzed limbs. Ten of these children were girls and eleven were boys. In seventeen the paralysis was left-sided, and in three of the remaining four, who had a right-sided paralysis, the mental defect was much more profound than in those of right-sided affection. In only four children was the head symmetrical. The asymmetry of the head was shown in nine of the left-sided cases as diminution in size of the right side, and in six others the left side was small (the same side as the affection of the limbs.) Of the four children with right hemiplegia, two presented asymmetrical heads, a right-sided and left-sided enlargement. Hydrocephalic heads were noted in four instances and microcephalic in five, one other presenting a dome-shaped head twelve centimeters in height. Three cases presented certain indications of pressure of the obstetric forceps as a possible cause of porencephaly, one showing a depression at the vertex and two others upon the parietal bones. In only one case was one side of the face smaller than the other, and in four there was a moderate amount of facial paralysis. The shoulder girdle was involved in eleven cases, showing a decreased circumference of an average of six centimeters. Paralysis of the trapezius was present in eight cases. In the arm affections of the extensors were much more common than those of the flexors, seventeen cases of paralysis of the musculo-spiral as against one case involving the musculo-cutaneous, the latter leading to an over-

growth of the triceps, and the former to over-development of the flexors. The musculature of the pelvis and hips was much less affected than that of the shoulder; in only four cases as a result of paralysis of the glutei was there hypertrophy of the cruralis and obturator, holding the thigh in a position of adduction and flexion. The leg, on the other hand, was frequently the seat of severe paralysis, especially in the distribution of the peroneal nerve so that, in connection with the over-development of the calf muscles, walking was very seriously impaired. Disturbances of sensibility were present in nine cases, and were most marked in the hands. As a rule, these sensory disturbances were accompanied by vasomotor irregularities in the skin, cyanosis and subnormal temperature. The reflexes in affected limbs were exaggerated in seven cases, entirely wanting in three, diminished in four, and in the others were normal.

The writer then describes the anomalies of development of the bones, which are illustrated by numerous radiographs.—*Abstracted by Henry Hun, M. D., for Albany Medical Annals.*

HEREDITARY APHASIA; a Family Disease of the Central Nervous System, due possibly to Congenital Syphilis.—Stone and Douglas. *Brain, Autumn, 1902.* (Hun, *Albany Medical Annals.*) The author states this condition was observed in eight members of a family; three cases appearing in one generation and five cases in the generation following. The lesions suggested syphilis as their origin but this was not proven conclusively. The main features of the disease did not appear until adult life and were the following: retention of urine, attacks of temporary aphasia with loss of power on the right side of the body, gradually increasing opacities in the vitreous humor of the eyes, loss or diminution of pain and temperature sense, muscular weakness, epileptiform convulsions, and sudden death preceded by unconsciousness. Wasting of the soft tissues was marked only during the latter stages of the disease.

Author's Case, December, 1897. A man, aged 23,

whose present condition began nine months ago. He was strongly built and had always enjoyed good health. The first symptoms of the disease were retention of urine and loss of sexual functions. This was preceded by attacks of severe pain in the end of the penis. Soon after, he noticed spots in groups before his right eye. Two years later, his retention symptom was somewhat better, but he still had to use the catheter to empty the bladder. On examination, there was no loss of tactile sensation, but pain and temperature sense was markedly affected. Areas on the arms, abdomen and legs, especially below the knees, were analgesic. The knee-jerks were sluggish. The muscular power was normal and there were no tremors. Smell and taste were normal. There was marked opacities in the vitreous of the right eye, and the left was not clear. The right pupil was smaller than the left, and both reacted sluggishly to light. The discs and choroid were normal. He complained of shooting pains in the legs and twitchings in the lumbar region. Drowsiness was marked. He would sleep twelve hours out of the twenty-four. Hearing was diminished, especially in the left ear. The drum membranes were normal. Aphasia and paralysis were absent up to this time. One year later, after considerable physical exertion, he had an attack of aphasia which lasted one hour. Five months later he had a series of attacks of temporary aphasia with weakness of the right arm. In that time he had lost considerable flesh and had become quite weak. His memory was feeble, his pulse rapid, his legs were smaller and the shooting pains in them became more severe. The areas of analgesia showed no change. The attacks of aphasia became more frequent, so that he had one about every day. During the next spring and summer he improved very much. The attacks grew less frequent and he gained in flesh and strength. In the last nine months of his life, he had but four attacks. These were very severe and were followed by periods of unconsciousness. He died in the last attack.

Autopsy. The dura of the brain and cord was intensely congested. Between the dura and the cord was a

rusty-colored, gelatinous substance. This was most marked in the lower portions of the cord, but was present over the brain and the rest of the cord. In the cord it was more marked on the posterior aspect, and in the brain, in the fissures of Sylvius and between the frontal lobes. The surface of the brain showed marked congestion. Otherwise the brain showed no macroscopic changes.

Microscopic examination. Sections of the third left frontal convolution were practically the same as those from other regions. They showed a fibrous hyperplasia of the arachnoid tissue with increased vascularity. Sections of the cord showed intense vascularity, especially in its lower portion. The vessels of the dura and pia were increased in size and number. In the arachnoid space, was a relatively large quantity of fibrous material. It was found in different situations among the nerve roots, especially posteriorly. There was an extensive round cell infiltration of the periphery of the cord, especially in the neighborhood of the posterior nerve roots. The cord also showed degeneration of the posterior columns. In the lumbar region this degeneration was mainly in the postero-external columns, but further up it was limited to the postero-median columns. The peripheral nerves were normal.

TRAUMATIC LOCOMOTOR ATAXIA.—Allen McLane Hamilton (*N. Y. Med. Jour.*, November 14, 1903). This term is used instead of *tabes dorsalis*, because the latter must always be associated with an actual degenerative lesion of the posterior columns. He finds that traumatic locomotor ataxia usually develops after a railway accident. Genuine *tabes* with arthropathies, optic nerve atrophy, Argyll-Robertson pupil and gastric crises, it has been thought can have no such origin but is usually due to syphilis. The author thinks when the symptoms develop after accident, they were probably present before, but not recognized on account of their mildness. The author believes in the possibility of a pseudo-*tabes* very closely resembling the form which is universally accepted as a distinct entity and as caused by trauma. He reviews the symptoms of *tabes*,

and compares them with those of the four forms of pseudo-tabes, viz.: Hysterical and neurasthenic forms; residual cases, where, after laceration of the cord, there remains a lesion of the posterior columns; cases where, through wrench or twisting of the body, there is tension or actual torsion of the posterior spinal nerves, traumatic neuritis with predominating sensory symptoms; cases due to initial lesions with a recurrent hyperemia and pressure. He reports three real cases, and one of malingering.

THE SUDDEN ATROPHIC INFLUENCE OF CRANIO-SPINAL NERVES, with report of a case. Coulter (*Med.*, Apr., 1903) reports the case of a child of seven years, who, after a convulsion and during unconsciousness, had falling of the hair from two symmetrical areas of the scalp, corresponding to the distribution of the small occipital nerves. Microscopically the hair was found to be 50% shorter than the normal hair, of normal diameter at the base but tapering toward the end and deficient in pigment. The author regards his case as unique in that the areas involved are symmetrical and the patient was in a state of unconsciousness at the time the change took place, and therefore oblivious to pain, which has been assigned as a cause in some cases of sudden change in the hair pigment. Under certain conditions, the author concludes, the craniospinal nerves may exercise a sudden atrophic influence on the skin and its appendages. —P. P. & P. *Abs. Int. Med. Mag.*

THE RELATION OF FAT TO NERVOUS DISEASE.—Bradford C. Loveland, M. D., of Fayette Park, Syracuse, N. Y., read at the 36th annual meeting of the Medical Association of Central New York, at Auburn, September 22, 1903, the following interesting paper which we abstract from the *Buffalo Medical Journal* of December, ultimo:

Fat exists to some degree in all living animals, and its proportionate amount is in some unknown way under the influence of the nervous system. The trophic function of the nervous system governs also the growth and development of muscles and other tissues as well as fat. It is a

common clinical observation to note the rapid loss of flesh in melancholia, the impossibility of getting flesh on a case of anorexia nervosa, and like observations where the cause behind the disordered function was a diseased mental state.

It is not so common to note rapid and extreme increase in fat following an unusually distressing bereavement, or after hemiplegia. I have a picture of a woman who when it was taken weighed 213 lbs. She was 5 feet 1 inch in height and weighed, when married, at the age of 22, 90 lbs. Her weight gradually increased until at 45 years she weighed 140 lbs. Her weight remained about the same until she was about 58 years old, when she was called to a distant state to attend the funeral of a brother who died suddenly and unexpectedly. On her return she found that her husband had died during her absence, equally unexpectedly. From this time she rapidly increased in flesh till she reached 213 lbs., and with her small bones it was a painful burden to carry.

Another woman, after an attack of hemiplegia which left her mind weakened as well as her body, steadily increased in flesh until it took two nurses and a tackle to move her from her chair to her bed, and while I do not know her exact weight, I think it was more than twice what it had been in health, or nearly 300 lbs. We know that in the early stages of paresis the patient frequently accumulates considerable flesh, while in acute mania, and acute melancholia, there is a remarkably rapid loss of flesh. I knew two people both, strangely enough, having been victims of a runaway accident, resulting in a severe nervous shock, who afterwards developed that rather rare disorder called *adiposus dolorosa*, or *Dercum's disease*, one of which was reported in the *American Textbook of Nervous Diseases*. It seems strange that such remarkable and widely divergent results as these referred to should be brought about through the influence of the nervous system, but they are sufficient to show the very important relation that exists between the nervous system and the production of fat.

Fat is the stored up heat producing fuel of the body, in other words, that portion of the hydrocarbon elements of

our food which has been absorbed and not burned up, or oxidised. These carbohydrates may go through the body undigested, and therefore are incapable of absorption; may be oxidised in the body, partly oxidised in the body; or transformed into fat and stored in the tissues. Starchy indigestion may be a nervous affair, or an organic difficulty, and careful study will decide which. Oxidation or combustion within the body is the natural result of most of the absorbed carbonaceous foods.

Imperfect oxidation may be the result of over ingestion of carbonaceous foods, insufficient exercise, or a depressed state of the mind and nervous system, and in its turn may cause many a nervous irritation, and even mental depression. I have seen at least one patient in whose case I could tell whether or not he had eaten sugar at a meal by the depth of his depression three or four hours afterward. The sugar suspended, his depression lifted. Fat is the result in healthy persons, of a very small proportion of our carbonaceous foods, and its function is largely as a cushion and protection to nerves and other delicate structures, and as a reserve supply to keep up the bodily heat. Yet excess of fat seems to impede oxidation, lessen the bodily warmth, and in some instances to add more burden to already over-taxed nerves.

I was called in consultation recently in a neighboring town, where I found a woman 5 feet 3 inches high, weighing about 200 pounds lying in bed, where she had been for three months or more, suffering with what is called neurasthenia, but in this case really hysteria. She showed unquestionable evidence of uric acid excess, both in the physical signs and in the urine. Her worst complaint was of a trembling and giving out in her legs and hips on any exertion. She had been taking frequent feeding, and used a considerable quantity of milk and eggs in her diet. It was evident that she did not need more flesh, but more oxidation, and elimination, and a marked change in her diet was advised. This case naturally suggests fat as a guide to diagnosis and prognosis, and as an index of improvement in the functional neuroses, or psychoses.

Given two persons suffering with much the same

neurasthenic symptoms, the one fat, possibly too fat, the other lean, and it will usually be found that the hysterical element is much stronger in the fat than in the lean one, and a prognosis of recovery can be given with more of hope in the thin one than in the fat one. This is especially true if the thin patient has at one time been fleshy and the digestive organs will stand forced feeding. Nourishment will answer for the watchword in the thin case, but we will have to choose some other motto for the fat one, say "elimination and oxidation," or "mental discipline, and increased mental control," or some combination of these.

Of fat as an index of improvement it may be said that in a thin person suffering from a neurosis or psychosis an increase in flesh is always a sign of improved nutrition, especially if blood conditions improve correspondingly, and hence encouraging to both patient and physician. But if a patient has been long in the toils of such an affliction it brings in another element to contend with, which is the question of habit, and that lack of self-confidence which so often seems to enslave the nervous invalid, and we cannot reasonably expect the strength and self-control to keep quite pace with the gain in flesh. The increase in flesh, however, may be used as a very efficient lever through which to apply mental therapeutics, which this class of patients generally need.

The trophic peculiarities of different individuals vary widely, and as we have all observed some people will keep fat on an amount and variety of food that will not keep others fat, but careful observation and definite prescribing of diet for individual cases and noting result, will soon enable one to prescribe diet for any given case so accurately that he can foretell whether they will gain or lose, and at what rate. One cannot, of course, be absolutely correct in his prognosis in this regard any more than in many other conditions, but he can be correct often enough to make it very encouraging to his patients and satisfactory to himself. The class of patients best suited to this sort of prescribing are the so-called nervous dyspeptics, or gastric neurasthenics, who have become thin and anxious, leaving off one article

of food after another thinking it hurt them, till they are really almost starved.

I have seen these sufferers after "doctoring" with medicines and digestives for years, and having dwindled to a mere shadow of their former selves, put on a diet, prescribed with the same care that we would prescribe quinine in malarial fever, gain from one to five pounds a week steadily for months till their recovery was complete.

The points it is desired to bring out in this paper are, first: that the depositing of fat in the body is under the functional control of the nervous system; second, that a careful study of the patient with regard to the question of fat may be of great help both in diagnosis and prognosis; third, that a physician may so know his patient that he can prescribe a diet and tell the patient with a reasonable degree of certainty, whether he will lose, or keep the same, or gain flesh, and at what rate; fourth, that an increase in flesh may be taken as an index of improvement in acute mania, in melancholia, and in the thin neurasthenic, as well as in the tuberculous, where it has long been regarded as such.

CYTO-DIAGNOSIS.—A striking observation on syphilitics is made by Ravaut, the Paris correspondent of *Medicine*. It related to the examination of the cerebrospinal fluid in the secondary period of the disease. The observation included 118 cases, 54 of whom presented roseola and mucous or cutaneous plaques. Of these seven were found to give a marked lymphocytic reaction of the cerebrospinal fluid. Of 55 cases with pigmentary syphilides or psoriatic forms, 41 gave a marked reaction, and in some cases it was intense. In two cases of syphilitic alopecia and two of facial paralysis in the secondary period the reactions were marked, while in five affected with iritis only one gave a strong reaction. Albumin, which is found normally in the cerebrospinal fluid in small quantity, was increased in the cases giving the cellular reaction. The conclusion to be drawn from these observations is that where there are persistent lesions of the skin there is a certain reaction in the ner-

vous system, which is shown by lumbar puncture. These cellular changes in the cerebrospinal fluid seem to parallel the cutaneous lesions. A practical deduction is that cyto-diagnosis furnishes valuable therapeutic indications in the treatment of syphilis. Where the cellular reaction is obtained treatment should be energetic.

TRACTION ON THE JAW IN WHOOPING COUGH.—J. Sobel (*Amer. Prac. and News*, vol. 34, no. 134) says of Naegeli's method:

Pulling the lower jaw downward and forward contracts the paroxysm of whooping cough in most instances and most of the time.

In cases without a whoop the expiratory spasm, with its asphyxia, is generally overcome, and in those with a whoop the latter is prevented.

Food in the mouth or esophagus contraindicates its application.

He advises trying this method in other spasmodic coughs and laryngeal spasms (laryngismus stridulus, pressure of enlarged cervical and bronchial glands, influenza, glottis spasm in catarrhal laryngitis), although his experience shows that it is less efficacious in these conditions than in whooping cough.—*Abridged from Dr. B. F. Turner's Abstract in Memphis Medical Monthly.*

THE GENESIS OF EPILEPSY.—This convulsive disease is intimately connected with ancestral alcoholism.

When closely traced to its origin, epilepsy appears to have its source, in great part, in epileptiform convulsions of alcoholic nature in the antecedents.

Where alcoholism in the father or mother, or in both, is absent, it is often found that alcoholism existed among the grandparents; and where the history is not sufficiently clear to incriminate any of the direct ancestry, the morbid predisposition is often indicated by the existence of alcoholism in the direct collateral family.

Epilepsy may be transmitted from an epileptic parent directly to the offspring.

Epilepsy may be transmitted through a generation free from the manifestations of the disease; the hereditary nature of the malady is then generally proven by the discovery of the existence of epilepsy in the direct collateral family of the preceding generation.

Insanity, neurosis, psychosis and criminality are often causes of epilepsy in the offspring.

The acute contagious and infectious diseases occurring during pregnancy may cause epilepsy in the child; but it is a question whether these causes are to be accepted as the sole factors in the causation of the disease—predisposing causes should be looked for.

Microscopic cerebral pathology shows that an intimate identity exists between the morbid changes found in alcoholism and those found in epilepsy. This fact is logical because alcohol stands, clinically, as the main cause of epilepsy.

Alcohol taken in excess in the form of wines, etc., does not cause true epileptic attacks; *epileptiform* convulsions are the rule in such cases so far as the original alcoholic is concerned; but the offspring of such subjects inherit true epilepsy.

Excessive use of absinthe causes true epileptic convulsions in the original alcoholic. The offspring then inherit epilepsy in the same manner as the offspring of the ordinary alcoholic.

The birth rate is low and the death rate is high in the alcoholic family—the death rate being particularly high during infancy and the cause of death during this period generally being meningitis with convulsions.

Of 140 cases of epilepsy considered, 90 cases had direct parental alcoholic heredity, making a percentage of 64+.

Considering the causes of epilepsy, it is evident that the educational prophylaxis is the most important agent for checking the growth of that disease.—*Dr. Louise J. Robinovitch.*

RECENT ADVANCES IN NEURO-PSYCHIATRY.—Two very important neuro-psychiatal publications have recently

appeared in medical literature, the one emanating from the biological laboratory of the Sheppard and Enoch Pratt Hospital, at Baltimore, the other from the laboratory of the neurological clinic at Halle, Germany, under the directorship of Professor Eduard Hitzig. Both deal with the intricate mechanism of brain function and brain action, the latter, however, dealing with the physiological, the former with the pathological side of the question. The Sheppard-Pratt publication, under the directorship of Dr. Edward N. Brush, is composed of a series of articles by members of the staff, on subjects relating to pathological changes in the brain and the symptoms produced by such lesions, while Prof. Hitzig's monograph consists of an elaborate study on the relation of the cortex and subcortical ganglia to vision.

About 34 years ago, Professor Hitzig first gave to the world his marvellous discovery of the motor center in the brain. In connection with Prof. Fritsch, by means of galvanic stimulation of the dog's cortex, they confirmed the conclusions of Hughlings Jackson, of London, and established beyond dispute the existence of motor centers in the brain. Following these men came Ferrier, Munk, Schiff, Horsley and Beevor, Goltz, Bastian, Bianchi, Sherrington, Grünbaum and others, differing somewhat in minor details, but all aiding to establish the original premise of Hitzig, that certain parts of the cortex are intimately associated with motor phenomena, while the remaining parts have no such direct relation.

Curiously enough in the Sheppard-Pratt report appears an excellent article on the motor cortex by Clarence B. Farrar, a clinical assistant of the hospital, who has reviewed the work done since 1870 from the speculative clinico-pathologic, physiologic, anatomic and embryologic viewpoints, and in his very able résumé finds naught to mar Hitzig's contention of 34 years standing, except that the confines of motor cortex-excitability have gradually become narrowed, so as to include only the middle region of the hemispheres, intermediate between the general and special sensory areas, on the one side, and the specific association or psychic center on the other.

Prof. Hitzig has grown to be an old man, so old that one can not help but be moved by his pathos and his regret at leaving the field of cerebral localization. He says in concluding his work, comprising over 400 pages, for the most part empirical, that "my investigations regarding the brain are now at an end. My eyesight has almost entirely disappeared and I am suffering with writer's cramp, so that I cannot continue my devoted work any longer." What an example for the younger generation of investigators, what an inspiration, what a figure to look up to! The passing of Professor Hitzig, however, does not mean the decadence and the slumbering of cerebral investigation. The work so eagerly begun by him is being continued throughout the world, and with much energy and perseverance in the United States.

Dr. Brush's report is but a single example of what other institutions are doing along the line. The pathological laboratories of the state institutions are doing work comparing favorably with that done in European laboratories, and the high character and deep scientific spirit is universally acknowledged.

The report of the Sheppard-Pratt Hospital may well be taken as an example, and a closer examination of its contents will reveal the scope and intent of its author.

The director of the laboratory, Stewart Paton, contributes an able article on studies in the manic depressive insanity. In addition to the suggestions made by the author that more extended observations should be made: (1) regarding the variations of the blood pressure, and (2) regarding the changes in the urine during the period of excitement or depression, he might have added also that the functions of the liver should be especially noted for cholemic influence. Clarence B. Farrar contributes an interesting article on the typhoid psychoses. After narrating four cases and discussing briefly the current teaching concerning the effects of the typhoid process on mental functions, the author finally concludes that there, neither in its clinical or anatomical picture, is the typhoid psychosis distinctive.

The next following brief article by William Rush Dunston, Jr., on some points in the diagnosis of dementia precox, is devoted mainly to the pointing out of certain symptoms which the author found helpful in differentiating dementia precox from neurasthenia and the recovery psychoses. The most important of these is the slow physical reaction or psycho-motor retardation, having been found present in every case observed by the author. A case of Huntington's chorea with autopsy is the next paper contributed by Glanville Y. Rusk. The author gives the clinical history of a case of this rare disease, with a minutely described microscopical examination of the brain.

Dr. Clarence B. Farrar's article on the motor-cortex has been alluded to. Another carefully examined case is that on acute paresis, by Dr. Stewart Paton and Dr. G. Y. Rusk. The microscopical findings revealed nothing that was essentially characteristic of the disease; the character of the changes in the various organs as well as in the central nervous system suggests a general intoxication. Two handsomely engraved plates accompany this article, showing large and small pyramidal cells from the cerebral cortex, bloodvessels, and neuroglia cells. The concluding article is by Dr. William Rush Dunston, Jr., on a case of dementia precox, with autopsy. The microscopical examination showed the greatest amount of cell changes in the first frontal convolution, with slight increase of neuroglia nuclei, phagocytosis and considerable cell disintegration. Four handsome plates accompany this article.

There must be considerable satisfaction to Dr. Brush for being the sponsor of a report from his institution, so highly scientific and thoroughly mastered as this, which has been so inadequately outlined in this review. He has set a good model for similar work by other institutions.—*Wm. Warren Potter's Editorial in Buffalo Medical Journal.*

A MICROCOCCUS THE CAUSE OF IDIOPATHIC EPILEPSY.—There is, perhaps, no disease, however distinct in its symptomatology, to which a bacterial origin is not ascribed. The latest is epilepsy. Bra (Rev. Neurology,

"Practical Medicine Series," September, 1903) demonstrated a very active micrococcus in the blood of seventy cases of idiopathic epilepsy. He proposed the name neurococcus for this parasite. The bacteria were found only during the paroxysmal stage, and never in the normal individual. Moreover, the blood of epileptics had a very strong agglutinating effect on these germs, which property was not possessed by the blood of healthy persons. In fact he proposes this agglutinating power as a differential diagnostic test in doubtful cases of epilepsy.—*Ed. St. Louis Courier of Medicine.*

ORGANIC DISEASE OF THE BRAIN FOLLOWING TRAUMATA.—Stadelmann (Berliner klin. Wochenschrift, No. 50, 1902, and No. 1, 1903) reports three cases of late development of organic disease of the brain following traumata of the skull. In the first case the head was struck by a stone. Severe psychic disturbances, maniacal attacks and suicidal tendencies developed several weeks after the reception of the injury. Life was terminated by suicide.

Case No. 2 made a good recovery from an injury to the head, but a short time later, severe headaches and loss of consciousness developed suddenly, followed by typical Jacksonian epilepsy. The autopsy revealed extensive softening and deep hemorrhages into the motor area and frontal lobe.

In the third case, a cerebro-spinal meningitis (proven by autopsy) developed seven weeks after the reception of the injury.

During the discussion of the paper, additional cases were reported by Fuerbringer, Bloch, Benda, Davidsohn, Kron, Bernhardt and Remak, thus demonstrating the relative frequency with which late development of organic disease of the brain after such injuries is met with.

RESISTANCE TO VARIATIONS IN TEMPERATURE AND TAKING COLD.—O. Kohnstaun (*Centralblatt f. Innere Med.*, No. 41, *St. Louis Medical Review*,) states that the trauma produced by exposure does not cause one to take cold by causing the skin capillaries to contract, thus producing

hyperemia of the mucosa of the respiratory tract which is favorable to bacterial attack, but through nervous influence. The stimulus passes to the respiratory and cough centers in the medulla, along the tractus antero-lateralis ascendeus, through collaterals of the temperature tracts to the formatio reticular's grisea, where the centers for respiration and cough lie.

Since centers of the vegetative function named and salivary secretion are found here, he believes it possible that a vasodilator center is present also, which can produce hyperemia of the mucosa through fibres coming from the vago-glossopharyngeus and trigeminus nerves. In support of this theory, he states that local applications of cold to the back of the neck are scarcely able to produce a displacement of the blood sufficient to produce cold, and cites that the slightest exposure to cold during a catarrhal attack will cause coughing and increased mucus secretion.

HEMORRHAGIC ENCEPHALITIS WITH ESPECIAL REFERENCE TO ITS TUBERCULAR FORM.—Dr. Bombicci. In cases of encephalitis, the gray matter is more frequently involved than is the white matter. Polioencephalitis is, therefore, the proper term to be used for designating this inflammatory condition, in which leucoencephalitis is only exceptionally applicable. The cortex and the ganglia are more frequently affected than are the accessory parts of the brain. For this reason the principal forms of encephalitis may be grouped into cortical and central encephalitis. Microscopically, encephalitis is distinguished by new vascular formations, exudations and capillary hemorrhages. The tissues of the new vessels are particularly of low formation and are easily ruptured by changes in the vascular tension. The nervous cells of the ganglia are distinguished by being particularly resistant to phlogogenic agents; they remain intact, therefore, in a large number of instances of encephalitis. This fact accounts for the absence of motor and sensory disturbances in cases of inflammatory focuses in the ganglia; the same fact also explains the possibility of recovery from disturbances caused by encephalitis even when the disease

is characterized by grave functional impairment. Granular cells, or cells of Kluge, are very rarely found in encephalitic focuses, while their presence in focuses of softening is of frequent occurrence. The author agrees with other investigators that encephalitis most frequently coincides with infectious diseases. This does not exclude the possibility of the existence of independent forms of the disease in which infection and alterations of other organs are responsible for the encephalic disease. Tuberculosis is, beyond doubt, the most frequent cause of encephalitis. Thus, the existence of a single caseous adenitis may be the only tubercular manifestation and encephalitis the consequent disease (*Rivista Sperimentale di Freniatria*, Vol. XXIX, fasc. 1-2).

THE ACTION OF ARSENIC ON THE BONE-MARROW OF MAN AND ANIMALS.—Small repeated doses cause increase in the number of leucoblastic cells, little or no change in the number of erythroblastic cells, marked hyperæmia, and atrophy of fat cells.

There is no increase in the red corpuscles or hemoglobin of the blood during this stage.

Under repeated doses, large enough to cause cachexia and emaciation, the bone-marrow undergoes hyaline degeneration accompanied by decrease of the red corpuscles and hemoglobin.

These changes result from other drugs and poisons also.

Arsenic does not directly cause increase of red-blood corpuscle by the bone-marrow.

The so-called "hematinic" action of arsenic in pernicious aenemia, malaria, lymphadenoma, leukemia, and other diseases results probably from a specific action on the parasites which cause these diseases, and not from any direct action on blood formation.—*Stockman and Charteris' conclusions, Journal of Pathology and Bacteriology for May, 1903.*

PECULIAR DISTURBANCE OF THE APPRECIATION OF TIME IN A CASE OF GENERAL PARALYSIS.—Dr. Vorobiev: The case analyzed is one of ordinary general paralysis with excitation, refusal of food, etc. The disturbance of the

appreciation of time related at first to the hour of the day, the patient imagining in the evening that it was still eleven o'clock in the morning. This delay in the count of time gradually increased, so that September 29, the patient thought that it was still September 28, thinking that only one half hour had passed since eleven o'clock of the preceding morning. September 30, he thought that it was still September 28, but noon time. He then added one half hour for every twenty-four hours that elapsed, so that October 15, the patient had advanced in his count of time to seven or eight o'clock of the evening of September 28. He thus kept up his count until he reached the midnight hour. As he slept during the night, he did not advance farther than September 29 for many days after. He admitted that his calendar differed from the one generally accepted and at times gave rather witty explanations of the reason of his peculiar method in counting time. His appreciation of time otherwise was good. He knew that dinner lasted about one hour, could give a detailed chronological account of incidents that had taken place during the ten weeks of his stay in the hospital, his memory was good. December 6, he promptly recognized a professor whom he had seen the preceding first of October, remarking that he had seen him once before—this morning. His memory is excellent in regard to remote incidents, but speaking of incidents that had occurred four days previously he said that they had taken place two hours previously.

The author considers that the patient's trouble in measuring time was not due to delusions, but to a special disturbance of the senses of appreciation of time.

Animals and even fishes have an appreciation of time and know the hours when they are fed. It is reasonable to suppose, therefore, that gastric sensations have some connection with the sense of appreciation of time. If this supposition were true, it would explain why the aberration in the appreciation of time in the above mentioned case coincided with his refusal to partake of food. It is true that the patient suffered from the same aberration when he resumed to eat voluntarily, but the swallowing of food does

not necessarily imply that the stomach was in normal condition. It is possible that there exists a cerebral centre of sensations having some connection with the sense of appreciation of time. (*Journal Imeni S. S. Korsakova*, fasc. 1-2, 1903).

CLINICAL PSYCHIATRY.

ON THE RELATION BETWEEN MENTAL STATES AND THE CIRCULATION AND RESPIRATION.—(*Ueber die Beziehungen psychischer Zustände zum Kreislauf und zur Athmung.*) N. Hirschberg. *St. Petersburger medicinische Wochenschrift*, 1903, No. 2. The author sets himself the task of answering the following two questions:

(1.) Is it necessary for an external excitation to reach consciousness in order to produce an effect upon the circulation and respiration? and,

(2.) Are the different states of consciousness accompanied by distinct changes in the respiration and circulation, characteristic for each one?

He answers the first question in the affirmative by the following explanation, namely, that in unconsciousness there is no effect from an external irritation; a moderate stimulus in light maniacal conditions excites the attention in passing; whereas the same irritation in an excitable hysterical person causes an unpleasant feeling, or even a sensation of pain.

The second question is more difficult of explanation. Complicated experiments were carried on upon two normal and twenty-eight mentally affected individuals, with Lehmann's plethysmograph, Zimmerman's kymograph and Marey's recording tambour. The subjects of the experiments were placed in a quiet and somewhat darkened room facing one of the walls, so that the element of personal observation was reduced to a minimum. The right arm was placed in the plethysmograph filled with water, and the left upon an unmovable table. The kymograph and other instruments were placed upon a table at the left and behind; near these was seated the experimenter. At first,

records were made to establish the repose of the subject and to secure consistent results. Then the actual experiments were made with the tuning fork, a pain-producing faradic electrode and unexpected pistol shots, and by passing under the nostrils a solution of sulphuric acid. The tests were continued daily for four weeks and required ten to fifteen minutes each time. The results are summarized as follows:

(1.) Every irritation, in order to produce an effect upon the breathing and circulation, must reach consciousness.

(2.) Each state of consciousness is accompanied by certain characteristic changes in the circulation and respiration independently of the character of the underlying irritation.

(a.) In voluntary active concentration of the attention, acceleration of the pulse occurs, and the volume of the arm increases in greater or less degree. The respiration is not necessarily affected, except in accentuated concentration of the attention, when the breathing becomes superficial and irregular.

(b.) Involuntary (passive) states of the attention are practically never attended by changes of the respiration. The volume of the arm and the pulse rate remain unchanged, while the duration of the pulse is increased always.

(c.) During fright the breathing is at first interrupted, and after a few irregular and superficial inspirations returns gradually to the normal. The volume of the arm increases, then declines, and finally again increases to the original size. The changes in the pulse are in the highest degree irregular; very frequently the pulse remains unaltered, in other cases is accelerated, and occasionally is decreased.

(d.) In pain there is first a hesitation of the breathing, after which follow almost always a series of hurried and deep inspirations. With slight pain no changes are noted in the breathing. The volume of the arm diminishes notably, and this frequently lasts longer than the pain. The volume and duration of the pulse beat are lessened, but

as soon as the pain begins to subside, the strength and duration of the pulse increase with the enlargement of the arm.

(e.) With unpleasant sensations, such as are called forth by disagreeable smell, the volume of the arm and the pulse strength are reduced. The stronger the sensation the more marked the changes.

(g.) The condition of complete tranquility of mind is characterized by an equally restful state of the respiration and circulation. In mental perturbation, hastening and deepening of the respiration appear, and at the same time increase in the volume and intensity of the pulse similar to what occurs during the presence of an unpleasant sensation.

The relations of the circulation and respiration have been studied by Ragosin in mental cases. It was shown that a painful electrical stimulus induced marked changes in the pulse and respiration in maniacal states. These reactions were wanting in cases of mental enfeeblement, and this was in proportion to the degree of the enfeeblement. In coma, after an epileptic attack, they were entirely wanting. In melancholia, the effect of the irritation was very slight or absent, whereas the respiration in these cases reacted as shown above. This all indicates that the irritation, to affect the pulse and respiration, must reach consciousness.

From these considerations it may be stated:

(1) Every mental state both in normal individuals and in cases of mental disease, entirely independent of differences in the character of the mental disease (assuming the same degree of consciousness), is associated with characteristic changes in the respiration and pulse.

(2.) The atypical reaction mentioned in connection with melancholia, is not peculiar to that disease, but depends upon a momentary change in the degree of consciousness.—*Abstracted by Blumer, Albany Medical Annals.*

NEUROTHERAPY.

DORMIOL AS A HYPNOTIC IN MENTAL DISEASES.—
Drs. Gonzales and Pini: Dormiol is a dimethyl-ethyl-

carbinol-chloral and is a valuable hypnotic in nervous and mental insomnia, especially when the other hypnotics, vaso-depressive in action, are contra-indicated (*Rivista Sperimentale di Freniatria*, Vol. XXIX. fasc. 1-2).

ADRENALIN IN GENERAL SURGERY AND NEUROLOGY.—Harry Gidney, F. R. C. S. (Edin.), D. P. H. (Camb.), etc. (in the October *Indian Medical Gazette*) finds "the clinical usefulness of Adrenalin very extensive. Owing to its power of rapidly and effectively producing vaso-motor constriction, it is adapted to the treatment of all inflammatory conditions. It is also of great value in arresting hemorrhage during surgical operations. It is indicated whenever and wherever any local hyperaemia exists, (in inflammations of mucous surfaces such as those of the eye, throat, larynx, pharynx, urethra, bladder, nose, rectum, vagina, uterus, stomach, etc.) It is also used as a preventative or controlling remedy, given either internally or externally prior to an operation, lessening the amount of bleeding during an operation. It is non-irritant to mucous membrane, unless excessively used.

"The author finds that Adrenalin is admitted (in literature on the subject) to be the most powerful and rapid stimulant and tonic we have in cardiac affections, haematemesis, hemoptysis, hemophilia, hematuria, menorrhagia, post-partum hemorrhage, purpura, scurvy, etc. It is said to be the most rapid restorative in chloroform and other forms of anæsthetic syncope. In such cases it is advisable to administer it intravenously."

Of several operations, major and minor, in which Adrenalin was employed, the first case was fracture of the vertex of the skull with one of the larger branches of the middle meningeal artery torn and profuse dural hemorrhage and capillary oozing. They were controlled by the use of the 1-1000 solution. In a second case of hemorrhoids, profuse bleeding was checked by the rectal insertion of a plug of cotton wool soaked with Adrenalin Chloride Solution.

A third case (one of skin grafting) in which the

author tried pressure to stop the capillary bleeding. He applied Adrenalin Chloride Solution with almost immediate cessation of all oozing, converting a usually long and sanguinary operation into a short and comparatively bloodless one.

The fourth case, one of hemorrhage after the extraction of teeth, and the fifth, which appears to embrace the author's experience in a number of cases of epistaxis, afforded additional opportunity to test the hemostatic effect of Adrenalin.

A post-partum hemorrhage was checked by swabbing the uterine cavity with Adrenalin Solution, while the same happy result was obtained in a case of secondary hemorrhage following an operation for the relief of a mammary abscess.

The author has found that the instillation of a 1-5000 to 1-2000 solution of this drug reduces inflammation and considerably cuts short the process of conjunctivitis. He applies it (diluted) over the inflamed parts by means of a soft camel's-hair brush. He always uses the preparation containing Chloretone, which has a decided local anesthetic action, relieving much of the photophobia and pain. He is fully convinced of the power of Adrenalin to arrest or lessen the bleeding that arises from the cut ends of the iris after iridectomy. He speaks highly of its efficiency in chemosis, cataract operations, evisceration of the eyeball, operations for ectropion, symblepharon and trachomatous pannus.

The author concludes that in all cases of minor surgery in which it is desired to arrest bleeding from any cut or exposed surface, we have in Adrenalin a most useful, powerful drug—non-poisonous, non-irritant and non-cumulative, especially in operations upon the conjunctiva and eyelids.

BEST METHODS OF COUNTERACTING PSYCHOSES DUE TO SCHOOL STRAIN.—W. J. Herdman, Ann Arbor, (*Jour. A. M. A.*,) November 14, 1903, suggests:

1. A careful medical inspection of school children at the beginning of their school life and at stated intervals

thereafter, covering both their physical and mental capacities.

2. All teachers should be well instructed in the physiology and psychology of the child and in the principles of school hygiene.

3. School buildings and their environments should be made to comply with all the requirements of modern school hygiene, as to light, pure air, temperature, seating, decorations, play ground facilities, etc.

4. The curriculum should be so flexible as to allow more opportunity for the exercise of the individual judgment of the teacher, as to the best method to adopt for each child in order to secure for it the greatest educational value, and the curriculum should include facilities for appealing to the mental faculties along every sensory pathway, among which facilities he would mention nature study, rational kindergarten, manual training and physical exercise.

5. The number of pupils assigned to any one teacher should be only such as she can care for to the best advantage. Time should be allowed the teacher for a careful study of the physical and mental needs of each pupil.

6. A closer relationship between the parent and teacher, with a view of securing the end sought—the highest and most useful development of the child.

7. The removal, as far as possible, of all conditions within or without the school room that interfere with the accomplishment of this purpose.

CORDITE CHEWING. A NEW VICE AMONG SOLDIERS.—*The Medical Age* notes that as a result of the South African war a new form of narcomania has been discovered. The details of the method are given by an English army surgeon in a recent number of the *British Medical Journal*. It consists of the eating of cordite with which the Lee-Netford cartridges are charged, and the effects are about as unpleasant as it is possible to imagine. Cordite consists of nitroglycerin, guncotton, and a small percentage of mineral jelly. Its taste is sweet and pungent. Dis-

solved in tea it produces an almost immediately exhilarating effect. Following this a deep sleep is produced lasting from five to twelve hours. On awakening there is experienced a dull headache, accompanied by muscular twitching and protrusion of the eyes. Its consumption excites a quarrelsome, destructive mania in an otherwise peaceably disposed individual. The inception of the habit is given by the fact that a large number of the men used it to light their pipes. In this manner it gives the tobacco a sweetish taste. Cordite used in beer or spirits seems to brutalize the mildest man and to make a temporary maniac of him. Owing to its exceedingly bad effects it is not likely that this new vice will gain a very strong foothold among soldiers who use this particular make of cartridge.

NEUROSURGERY.

ANASTOMOSIS OF THE FACIAL AND ACCESSORY NERVES.—Bernhardt opened a discussion before the Berlin Psychiatric and Neurological Society on the practicability of anastomosis between the paralyzed facial nerve and the accessorius. He presented a patient who had been operated on some time before by Gluck. The patient had a right-sided facial paralysis. The paralyzed facial nerve had been implanted in the spinal accessory. The nutrition of the muscles was fully restored and reacted to both galvanic and faradic currents. There was no voluntary movement of the facial muscles. When the patient moved the shoulder the facial muscles on the right side contracted; when the arm was passively raised the muscles of the face did not contract. He discussed the possibility of uniting the facial with the hypoglossal. But this is followed by some disturbance in the ability to swallow, and it is doubtful if the improvement which would follow in the muscles of the face would be a full compensation for the somewhat impaired ability to masticate and swallow. Unquestionably the result would be better were the hypoglossal united with the facial, as its origin is so much nearer the facial.

ADDITIONAL EDITORIALS.

DEATH OF DR. E. C. RUNGE.—Since Dr. Runge's resignation, death has claimed him of grippe-pneumonia, and thus a promising career in psychiatry has been prematurely ended.

Dr. Runge was born in St. Petersburg in 1857. He received his education at the University of St. Petersburg. He came to St. Louis twenty-one years ago, where he studied medicine. He was graduated from the St. Louis Medical College in 1891. Two years later he married Miss Emily K. Foote, daughter of the late Samuel E. Foote, who survives him.

After his graduation Dr. Runge paid especial attention to diseases of the nervous system and brain, having been appointed superintendent of the St. Louis Asylum for the Insane during the administration of Mayor Walbridge in May, 1895, and reappointed by Mayor Ziegenhein and Mayor Wells.

THE DAILY MEDICAL comes to our sanctum laden with important matter from all over the world and the United States of America, of interest to every physician. The initial numbers show enterprise and ability on the part of its managing editor and we hope it has come among us to stay—the medical profession will feel its influence.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

HOW TO ATTRACT AND HOLD AN AUDIENCE. Price \$1.00 postpaid, Hinds & Noble, Publishers. 4-5-6-12-13-14 Cooper Institute, New York City.

If you have the "gift" of oratory this book will enable you to perfect it. If you are an indifferent speaker, you can become a finished one by accepting this book's guidance. If you are a beginner, but ambitious withal, this book will serve you as a guide-post to success, and by a path escaping the many embarrassments which discourage the novice.

Thorough, concise, methodical, replete with common sense, complete—these words describe fitly this new book; and in his logical method, in the crystal-like lucidity of his style, in his forceful, incisive, penetrating mastery of this subject, the author Dr. J. Berg Esenwein, head of the English Department in the Pennsylvania Military College, has at one bound placed himself on a plane with the very ablest teacher-authors of his day.

THE PERVERTS. By Wm. Lee Howard, M.D., Baltimore, Md., and published by Dillingham & Co., New York City.

This is an opportune, forceful and true presentation of the neuropathic and psychopathic side of social life, from a worthy and capable source of experience with these neurotically unfit members of society.

It is time that the erotopath and the sexual pervert of many kinds and the neuropath and psychopath among the criminal, the vicious, the crook, the crank and the inebriate, were more popularly and legally better comprehended.

This book is a praiseworthy effort to let in the light of neurologic and psychologic truth on the doctor Newcombers

of society and will prove profitable reading for the lawyer, the divine, the philanthropist and all who love their fellow man, under whatever name they may pass and bring results fruitful in enhancing the understanding of the neurotically unstable and in exalting the general welfare of mankind in the oncoming better time for humanity.

It is a truly remarkable production, and calculated to powerfully arouse the public mind to the importance of the closest study of anything and everything having aught to do with the psychically diseased individual; it portrays in forceful manner, the banefulness of the entire legal system under which we live in this country, in the manner of the handling and treatment of those suffering from any form of mental or sexual perversion.

With great skill the author intelligently weaves into the story, cases of atavism; the influences of heredity; and the various views entertained by jurists, physicians, anthropologists, criminologists, and many others, directly or indirectly interested in the proper method of the suppression of vice; nay, the eradication of vice, the building of virtue and the general improvement of the human species during its evolution.

"Dr. Newcomber, the principal character in the story, is the victim of dipsomania, having a form of it that the physician meets with many times in the course of his career, whether he recognizes the disease as it really exists or not. Dr. Newcomber belongs to a family of neurotics and sexual perverts, and two of his sisters are also characters in the story, as well as is his mother."

We think it unfortunate for the widest influence of the book that the author arraigns the church for its errors in training out the evil tendencies of morbid heredity instead of simply admonishing the clergy to blend more psychiatry and neurology with its precepts in training up a child in the way it should go. The book is a protest against wrong training and neglect of normal restraint of the early neurotically unstable and a warning to that egotistic pedagogy that ignores neuro-physiology in child teaching.

The evil of overstraining in Sunday school and kinder-

garten and other schools might have been dwelt upon without censure of our pedagogues and preachers for past ignorance for they have done what they thought was right. The innocents have nevertheless been slaughtered and the neuro-pathically endowed have been made perverts by false training.

“But evil is wrought by word of thought
As well as by want of heart.”

PROGRESSIVE MEDICINE, Volume IV, December, 1903.
Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 434 pages, 46 illustrations. Lea Brothers & Co., Nos. 706, 708 & 710 Sansom St., Philadelphia, December, 1903.

The completing volume of “Progressive Medicine” for the year 1903 contains some of the most important contributions of the series. Among these Dr. J. C. Hemmeter’s article on Diseases of the Digestive Tract. In the article on Surgery, by Dr. J. C. Bloodgood of Johns Hopkins, there will be found a particularly interesting discussion of the entire field of Anaesthesia, both local and general, considered not only from the standpoint of the surgeon-specialist but also from that of the general practitioner. Dr. Belfield’s contribution on Genito-Urinary Diseases covers the entire field in a most practical manner. In dealing with Diseases of the Kidneys, Dr. John Rose Bradford, of University College, London, presents an interesting discussion of the blood changes in chronic renal disease, and particular attention may be called to his able consideration of the surgical treatment of chronic Bright’s disease. Since Koch’s announcement in regard to the difference between human and bovine tuberculosis, scientists have been engaged in an earnest endeavor to ascertain the actual facts. This subject constitutes one of the most interesting of the topics discussed by Dr. Harrington, of Harvard, in the section on Hygiene. The conveyance of typhoid and other infectious diseases is another topic upon which Dr. Harrington presents the most recent views. The concluding section of the issue is taken

up with the Practical Therapeutic Referendum, by Dr. Landis, a thorough, up-to-date index of the progress in therapeutics. Because of their standing as consultants and teachers, the contributors to "Progressive Medicine" are peculiarly cognizant of the points possessing interest for the medical profession. With the new year, the annual subscription price will be reduced to \$6.

THE AMERICAN JOURNAL OF PSYCHOLOGY. Edited by G. Stanley Hall, E. C. Sanford, Clark University, and E. B. Tichenor, Cornell University, with the co-operation of F. Angell, Stanford University; H. Beaunis, Universities of Nancy and Paris; I. M. Bentley, Cornell University; A. F. Chamberlain, Clark University; C. F. Hodge, Clark University; A. Kirschmann, University of Toronto; O. Kuelpe, University of Würzburg; W. B. Pillsbury, University of Michigan; A. D. Waller, University of London; M. F. Washburn, Vassar College; Volume XIV, Clark University, Worcester, Mass. Louis N. Wilson, Publisher. 1903.

This is before us as a commemorative number with an excellent frontispiece picture of its distinguished founder and equally splendid contents.

"THE STORY OF NEW ZEALAND". By Professor Frank Parsons, Ph. D., of Boston, the well known writer and authority on law, economics and sociology; edited and published by C. F. Taylor, M. D., "Equity Series," 1520 Chestnut street, Philadelphia, Pa. It is printed on fine, heavy paper, with over 170 illustrations (many of which are full-page half-tones), and handsomely bound in cloth; 860 pages; \$3.00 net.

The following subjects will especially interest the reader in this volume: Scenery, City Views, Portraits of leading men, Descriptions of the Maoris or brown-skinned natives, Governor Hobson's Treaty with the natives, Land Monopoly, Land Titles guaranteed by the Government, Postal Savings Banks, Government Railways, State and Life Insurance, Public Trust Office, Grey's Campaign for Equal

Rights, Direct Nominations, Voting by Mail, The Political Revolution, Taxing the Monopolists, State Resumption of Large Estates, and Nationalization of the Soil, Deposit of Slums on the Land, Panics Prohibited, Nationalization of Credit, "Money-Ring Smashed," Referendum on Prohibition, Equal Suffrage and its Effects, State Employment Bureau, The 8-hour Day, Abolition of Strikes and Lockouts, Coöperation, Referendum on Local Land-value Tax, Attitude of the People toward the Single-Tax and toward Socialism, Old-age Pensions, State Operation of Coal Mines, The Principles Involved, Conservative Views, Opposition and Misstatements, The National Assets and Debt, What Next? Brief Biographies of 16 Leading Statesmen, Causes of N. Z.'s Progress, Contrasts and Unities, United States and New Zealand, with conclusions, Civilization Tables, Chronology of Leading Events (1642 to 1904), and bibliography.

ELECTRO-DIAGNOSIS: Scheme for the Differential Testing of Nerves and Muscles. By J. Montgomery Mosher, M. D. Brandow Printing Company, 10 to 16 State Street, Albany, N. Y. Publisher's price, \$1.00.

This book will prove of value for the purposes for which it is designed and aid the investigator in this not yet overworked line of electro-diagnostic research.

BATTLE AND COMPANY'S BACTERIOLOGICAL CHART is a useful reference chart for any office and valuable pocket companion for any young physician.

The pamphlet which accompanies this chart is useful reading and will give the reader a good impression of Battle's Papine and other therapeutic specialties.

TRANSACTIONS OF THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS. Sixth Triennial Session, held at Washington D. C., May 12-13-14, 1903.

These transactions continue to sustain their well-earned reputation for the exalted merit of the communications read before the congress. The pancrea, the gall bladder and gall

passages and their devious and operative procedures on the viscus constitute the main features of this volume with the exception of the excellent address of the President on "The Duties and Responsibilities of Trustees of Public Medical Institutes.

IODINE AND PHOSPHORUS. By R. W. Gardner, Phar. Chem., New York City.

Is a brochure of value for the practicing physician, showing excellent forms for administering Iodine internally, its various salts and combinations, chemically and therapeutically considered. It also discusses Gardner's Syrup of Hydriatic Acid, showing its superiority to all other forms of Iodine and the therapeutical indications for the employment of this excellent form of Iodine, with clinical data of interest to all practitioners.

THE PHYSICIAN'S VISITING LIST, 1904-'05. Published by P. Blakiston's Son & Co., Medical and Scientific Publishers, Booksellers and Importers, 1012 Walnut Street, Philadelphia.

Its merits hitherto commended by us are still maintained.

A COMPEND OF THE PRACTICE OF HAEMATHERAPY, as applied to General Medicine and Surgery, has reached this office with the compliments of the Bovinine Company.

It is a very satisfactory compend and will prove interesting and instructive reading to any physician who will take the pains to read it. The illustrations of blood dressing, graft points and healing results from blood dressing quite conclusively show the value of local haematherapy, while other cases demonstrate the value of Bovinine internally.

THE TENTH ANNUAL REPORT of the Craig Colony for Epileptics, at Sonyea, Livingston County, N. Y.

This shows the great advance and utility of this great State Institution. This report is instructively descriptive of

the utility of the means of treatment and occupation of the afflicted members of the colony. A model of this colony will be on exhibition at St. Louis' World's Fair this year, and it will be well worth a visit.

ARE WE TO HAVE A UNITED MEDICAL PROFESSION?

By Charles S. Mack, M. D. Published and for sale by the Author at 25 cents a copy; LaPorte, Indiana.

This is a plea for the homeopathic dogma of *similia similibus curantur* as the sole basis of therapeutics. The author thinks all who disallow homeopathy's claims are ignorant.

Dr. Wm. Lee Howard on "The Perverts." By R. W. Shufeldt, M. D., New York City. Member of the Medico Legal Society, New York City; Member L'Alliance Scientifique Universelle de France, etc.

A Clinical Study of Organic Iron. By John V. Shoemaker, M. D., Ll. D., Professor of Therapeutics and Clinical Medicine in the Medico-Chirurgical College of Philadelphia.

The One Hundred and Sixth Annual Report of the Board of Managers of the Maryland Hospital for the Insane, near Catonsville, Baltimore County.

Elements in the Recovery of the Incipient and Acute Insane. By J. E. Courtney, M. D., Denver, Col.—*Reprint from Denver Medical Times.*

Chronic Progressive Hemiplegia, with Remarks on Two Cases of Unilateral Paralysis Agitans without Tremor. By Hugh T. Patrick, M. D., Chicago.

Thirty-Second Annual Report of the Buffalo, New York, State Hospital to the State Commission in Lunacy, for the Year ending September 30, 1903.

Removal of an Upholsterer's Tack from the Right Bronchus. By Augustus Von Liew Brokaw, M. D., of St.

Louis, Missouri, Professor of Clinical Surgery in the Medical Department of Washington University; Surgeon-in-Chief, St. John's Hospital.

The Management of Exacerbations in the Course of Pulmonary Tuberculosis. By John F. Russell, M. D., New York.

The Mortality in Appendicitis; its Cause and Limitation. By A. J. Ochsner, B. S., F. R. M. S., M. D., Chicago, Ill.

Forty-fourth Annual Report of the Board of Directors and Superintendent of Longview Hospital, Carthage, Ohio.

Removal of a Five-cent Piece from a Strictured Esophagus. By A. V. L. Brokaw, M. D., of St. Louis.

The Indications for Operation in Hypertrophy of the Prostate Gland. By Dr. A. J. Ochsner, Chicago.

Tenth Annual Report of the Board of Trustees and Officers Massillon State Hospital, Massillon, Ohio.

The Toilette of the Peritoneum in Tuberculous Peritonitis. By A. J. Ochsner, M. D., Chicago, Ill.

Some Recent Advances in Medical Therapeutics. By Thomas E. Satterthwaite, M. D., of New York.

Nineteenth Annual Report of the Board of Trustees and Officers Toledo State Hospital, Toledo, Ohio.

THE
ALIENIST AND NEUROLOGIST.

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No. 2.

MULTIPLE NEURITIS: A CLINICAL LECTURE.

By F. W. LANGDON, M. D.,

CINCINNATI.

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Lecturer on Nervous and Mental Diseases in the Clinical and

Pathological School of the Cincinnati Hospital;

Visiting Neurologist to the Hospital.

Ladies and Gentlemen:

WE have for study this morning three patients, each of whom presents three leading groups of symptoms, namely:

1. Paralysis, of quadruplegic distribution and flaccid type.
2. Sensory defects, similar in extent and of varied character.
3. Loss of tendon reflexes in the areas affected.

Such a triad points almost conclusively to Multiple Neuritis, also called Polyneuritis and Parenchymatous Neuritis.

Historical:

The disease was originally described in 1822 by an American physician, Dr. Jackson, of Boston, under the name of "Alcoholic Paralysis."

Dumenil, in France, published, in 1864, the first case in which a lesion was found in the peripheral nerves. During the next twenty years the subject was materially added to by various authors, French, English and American.

Since that period the disease, in its numerous varieties, has been recognized by clinicians generally. An excellent account of its various forms may be found in Starr's "Organic Nervous Diseases," recently published.

Causation and Pathology:

The male sex, the third and fourth decades of life, exposure to cold and wet, fatigue, are all viewed as predisposing causes. Relatively, however, women are more predisposed than men to the alcoholic form, that is to say, of a given number of each sex who are intemperate in the use of alcohol, more women than men will contract the disease.

Climate and locality predispose to some forms. A changeable climate and certain tropical regions are remarkable in this respect.

The accredited exciting causes are very numerous, but may all be summed up under the one term "toxaemias,"—*toxic blood states*.

The toxic material may be (a) of extrinsic nature, substances originating outside the body. In this group we recognize:

Alcohol,	Naptha,	Trional,
Arsenic,	Nitrobenzol,	Carbon monoxide,
Lead,	Phosphorus,	Carbon bisulphide.
Copper,	Silver,	
Mercury,	Sulphonol,	

Some of these substances, you will observe, are used in various arts and occupations; others administered as medicines. The latter observation is important as indicating a general rule, namely: the coal tar derivatives or aniline compounds are not suitable for continuous or prolonged administration.

(b) *Intrinsic Causes:*

Those developed *within the body* as a result of various diseases and disturbances of its metabolism are: first, the

poisons accompanying *infectious disease*, such as diphtheria, la grippe, typhoid, typhus, septic and malarial fevers.

Scarlet fever, measles, whooping cough and syphilis are rare causes. It occurs in the course of leprosy and tuberculosis, and a very important form, beri-beri or kakke, is endemic in India, China, Japan, the Philippines and other oriental countries.

A second group of intrinsic causes are the blood states accompanying various dyscrasias: for instance, in the subjects of some forms of chronic rheumatism and gout, of diabetes, cancer, some of the anaemias, starvation, etc.

In fact so numerous are the causes and so obscure in origin are they at times, that it is occasionally much more difficult to trace the cause than to diagnose the disease. And yet it is of the utmost importance to discover the cause since upon its removal all our success in treatment usually depends.

Pathology:

The essential *morbid process* which characterizes the disease is a *parenchymatous degeneration* of the peripheral portions of the spinal nerves. You are all familiar with this term "degeneration," meaning in this connection *molecular death*. A parenchymatous degeneration is one which begins in the parenchyma or essential tissue of a part; hence in nervous disease, one which begins in the "neuron." The peripheral nerves, as you know, are composed of processes derived from two kinds of neurones, namely:

1. Dendrons of the peripheral sensory neurons, growing from the posterior root ganglia, and
2. Axons of the anterior horn cell or peripheral motor neuron.

As a result of being overwhelmed with a poison of some kind, these neurons die in certain vulnerable parts. These most vulnerable parts are, naturally, those most distant from their trophic or nutritional base of supplies, the neuron bodies. To put it in another light, when a tree suffers from drouth or disease, the leaves and smaller twigs die first.

Why, then, you may ask, do we call this process a

"neuritis," a term which signifies an "inflammatory" disease, rather than a degenerative one? Well, this is simply one instance of how a name may "stick," even when wrongly applied.

Neuritis as a primary process really does not exist; it is an *end process*, a result of the degeneration, hence, the term *degenerative* neuritis is often applied to it. The actual order of events or processes may be freely sketched, as follows:

First. Toxaemia.

Second. Degeneration or molecular death of neuron processes at their peripheral ends.

Third. Segmentation and liquefaction of these terminal portions of neurons, and of their ensheathing myelin or white substance.

Fourth. Exudation of liquor sanguinis, migration of leucocytes from the capillaries and proliferation of the neighboring connective tissue cells of the nerve sheath. Here is where the inflammatory element makes its appearance upon the pathologic stage. Following these events come:

Fifth. Absorption of the fluid portions of the necrotic neurons and of the inflammatory exudate, and,

Sixth. Regeneration of the destroyed dendrites and axons and their myelin sheaths. As to the precise source of the regenerative material, opinions differ at present.

One group of investigators attribute it solely to down-growths from the living proximal ends of the neuron processes. Others contend that their observations show the regeneration to be carried on solely by surviving nuclei of the original neurilemma sheaths of the destroyed nerve ends. These proliferate, their progeny arrange themselves in rows and a new axon and sheath is formed by their coalescence. It is admitted, however, that these newly developed ends cannot functionate until they establish actual vital continuity with their original proximal portions and so re-establish connection with their original neuron bodies, situated in the anterior horns or posterior root ganglia, as the case may be.

The pathologic processes *in the muscles themselves* must not be overlooked. They are, briefly:

1. Fatty and granular degeneration of many fibres; disappearance of striae.
2. Proliferation of the *muscle nuclei*; immigration of leucocytes into the degenerating areas.
3. Liquefaction and absorption of the necrotic portions of the fibres, together with some of the inflammatory exudate.
4. Organization of the remainder into connective tissue, with,
5. Regeneration of muscle fibres from the remaining nuclei completes the process, which requires months, and may never be completely accomplished.

As regards the *morbid anatomy* accompanying and following these pathological events, the most marked damage is in the anterior tibial and musculo-spiral territories. The *nerves* are first softened, swollen, reddened; later resuming normal outlines in favorable cases, but becoming more or less shrunken, fibroid and sclerotic in cases where regeneration is incomplete or the inflammation is of a markedly "productive" type. The muscles are pale, granular and fatty, destriated in places and after recovery may show an increase in amount of interstitial tissue, due to organization of inflammatory products.

Clinical History.

The alcoholic form is usually the type chosen for description. A wide range of symptoms, sensory, motor, reflex, trophic, vaso-motor and mental characterize the disease, which may be described in four stages:

1. The *prodromal stage*, lasting from a few days to a week or two, is characterized by paresthesia, such as numbness, tingling, occasional sharp pains and rheumatoid aches in the limbs. Some motor weakness is apparent to the patient. He tires easily and is disinclined to exertion. Ataxia of gait and station are present.

2. The stage of *rapid progress*, during which the patient becomes disabled, lasts about two weeks. The actual onset may be acute or sub-acute, and accompanied by mod-

erate fever, especially in the endemic forms. (Pulse 120 or more, small, weak.) The patient is disabled by severe pains in the muscles, with tenderness on pressure, which may be so extreme as to render the weight of the bed clothes a source of suffering. Along with the pain, motor-weakness of marked degree appears, often amounting to actual foot-drop and wrist-drop in a few days. The tendon reflexes in affected areas are lessened, and finally lost during this stage. This usually applies to the knee-jerks, not invariably. The pupils and cranial nerves escape as a rule. The sphincters are intact.

Vaso-motor disturbance, indicated by abnormal sweating and odema, is often present. Glossy, dry skin may be an alternative.

Trophic defects are evidenced by the muscular wasting and changed responses to electrical tests. R. D. is present to galvanism. No response to faradism.

Insomnia and mental defects are common in severe cases, and may occur in milder ones. The type of psychosis is that of a confusional insanity, with loss of sense of space and time. Illusions and hallucinations, usually of visual character, are present.

The chair becomes a wild animal. A portrait on the wall steps out of its frame and walks about the room. Zoological objects figure largely in the hallucinations, especially in alcoholic types. "Fairy-tales" are a feature of the mental state. The mental departures may be so conspicuous as to overshadow the neuritic symptoms, and the patient is thought to be simply insane. It is important to avoid this error.

3. *The stage of quiescence*, or stationary stage follows, lasting two to six weeks, during which period liquefaction and absorption are going on in the necrotic nerve tissues and inflammatory products. Considerable anaesthesia, "patchy" and irregular in distribution, is common during this period, as well as muscular paralysis. Regeneration begins in the destroyed endings. The mental state may clear, but some dementia may persist.

4. *A stage of convalescence* (duration two to twelve

months) is the final stage, during which normal sensation returns slowly and function is gradually re-established in the paralyzed muscles, provided they have been kept from complete degeneration by appropriate electrical treatment. This restoration takes place fibre by fibre, as the neuron ends are renewed. Along with this, voluntary power returns, even before faradic irritability usually, and before complete disappearance of the R. D. to galvanism.

Complications on the part of the heart (pneumogastric involvement) and the diaphragm (phrenic degeneration) may be serious in their effects on circulation and respiration. Hypostatic pneumonia is a grave event to be feared. Lacking complications of this character, the outcome is favorable in a fairly sound subject.

Our first patient is in the third or stationary stage of the disease; perhaps some beginning improvement is manifest.

He is a man of forty-five (45), a theatrical performer, who has been disabled for three months. As you note, note, he has double foot-drop and double wrist-drop. Testing his grasp by the dynamometer, we find the *flexors* also weak. Grasp R. 55, L. 60. (Normal, about 90 for a man of his build.) He walks with considerable difficulty and pain. His gait is ataxic, but he does not "thump" his heels down like a tabetic. On the contrary, he steps carefully and lightly, as though "walking on thin ice."

The muscles of his forearms and legs are tender when grasped; perhaps it would be more proper to say that the nerve ends of these regions are tender to pressure. The knee-jerks are absent; pupillary reactions good; no cranial nerve palsy. The onset, he tells us, was rather gradual, with numbness, tingling and weakness gradually increasing. This is his third attack in five years.

In attempting to trace a cause, he very candidly admits free indulgence in alcohol, but had been a *total abstainer* for six months preceding this attack. The cause therefore is uncertain. Supposing the two preceding attacks to have been alcoholic in origin, it is conceivable that, after apparent recovery, the neurons were left in a less resistant or more vulnerable state, as regards other causes of

toxaemia. Some of these, ordinarily ineffective may have determined the present attack. He has been exposed to malarial influences and had chills at the onset.

Our second patient, also a professor of the histrionic art, is in the stage of convalescence, and doing very nicely I am glad to state. He walks, as you note, fairly well. His grasp is 70 in the right hand, and 75 in the left. The pains and tenderness have disappeared and sensation is good in the extremities. The knee-jerks have not returned, but will doubtless do so.

This patient also admits departure from the paths of strict temperance, and the cause is less obscure than in the preceding case. He has been disabled about six months, and will be able to resume his occupation in six more—perhaps sooner.

Our third patient, a man of fifty, is also a professional man; he practices at the bar, over which are dispensed various exhilarating liquids. A year ago he was ataxic, unable to walk, had much pain and tenderness in all extremities and his knee-jerks were absent. Now, motor power is good everywhere, pain and ataxia are absent and the *knee-jerks have returned*.

Diagnosis:

Weakness, wasting and pain, of quadruplegic and symmetric distribution, are the main diagnostic symptoms. The tracing of the cause is important and sometimes difficult in obscure cases, due to lead, arsenic and other minerals used in the arts. Lead may be detected by the "blue-line" in the gums and by administration of iodide of potassium, which causes iodide of lead to appear in the urine. Arsenic, also, may be detected by urinalysis in recent cases. The malarial plasmodia may be found in the blood. The occupation and habits may furnish important clues to the cause.

Rheumatism, a diagnosis often applied to the disease by the patient, is excluded by the prodromata of sensory disturbance, by the symmetric, constant, progressive weakness and tenderness *in the muscles*, with wasting and R. D. Also, by the absence of marked joint tender-

ness and swelling. Acute articular rheumatism is a fugacious disease, flitting from joint to joint, subsiding in one and appearing in another. Neuritis steadily progresses from fibre to fibre, in nerves and muscles.

Myelitis transverse is excluded by its (usual) paralytic, not quadruplegic, distribution of the paralysis; by its more acute onset, rapid loss of sensation below the lesion, and by the occurrence of sphincter defect and bed-sores; also, by the absence of wasting and R. D., excepting in areas directly supplied by the cord segments affected.

Poliomyelitis anterior presents quadruplegia, but occurs chiefly in children, is markedly acute in onset; pain tenderness and anaesthesia are absent, and rapid improvement occurs in two or more limbs, leaving the others permanently affected. The disease is unsymmetrical after two weeks.

Landry's Paralysis, or "acute ascending paralysis," begins in the feet and extends upward to the oblongata in a few days, without pain or tenderness of muscles, and terminates fatally in a week or ten days, before muscular wasting or R. D. have had time to appear.

Locomotor Ataxia has a history of very gradual onset and progress, extending over months or years. The pains are spontaneous, shooting and intermittent for long periods. Motor power is good. There is loss of the pupillary light reflex.

The disease has existed for months or years before marked ataxia occurs. The gait in the two diseases is diagnostic. The neuritic steps high, the toes drag or scrape as they leave or approach the ground, and the foot *flaps* upon the ground, *toes* first. The tabetic also lifts the foot too high, but raises the toes higher than the heel and "thumps" his foot down *heel* first.

The prognosis is fairly favorable in a sound subject in early middle life. Yet, death may occur from failure to remove the cause, as in alcoholic cases; or from severity of the infection, as in beri-beri and other endemic forms.

Extension to the vagi is an event of extreme danger. In the exhausted, the ill-nourished and cachectic, the out-

come is usually fatal. Permanent mental impairment, usually dementia in type, may result.

Treatment:

The indications are causal, symptomatic, restorative. Remove the cause, alcohol, lead, etc., and favor elimination by measures addressed to the bowels, kidneys and skin. In infectious forms the salicylates, aspirin, quinine or iodides may be indicated.

Symptomatic treatment comprises measures to relieve pain and prevent deformity. Rest, cotton swathing of limbs, avoidance of changes of temperature, local applications of menthol in vaseline; administration of anodynes cautiously, watching the heart; opiates, if necessary. A correct position of limbs is important to avoid deformity from unbalanced muscular action. This is especially frequent in the legs and feet. The feet should be kept at a right angle to the legs, as in a fracture of the tibia and fibula, but splints or circular bandages must not be used for this purpose. Pressure is not tolerated and may produce ulceration or hasten muscular wasting. Pillows, to support the feet and remove the weight of the bed clothes, are available. The best measure here is Gowers' splint, a gutter of sole leather or pasteboard, with an upright sole piece kept in place by elastic bands from edge of sole piece to sides of splint below knee. Careful cotton padding is important to avoid pressure. You may see the splint in use here in the hospital.

Restorative treatment comprises dietetic and tonic measures. Nourishing food, strychnia, glycono-phosphates of iron, soda, lime, etc.

After the second or third week, gentle massage to the muscles with galvanism daily to the muscles and nerves, will materially hasten recovery.

LIMITING THE TERM "INSANITY."

ARE THERE NOT GOOD REASONS FOR LIMITING THE TERM "INSANITY" TO THOSE MENTAL CONDITIONS ONLY WHICH HAVE THEIR BASIS IN A DELUSION?

By J. W. WHERRY, M. D., LL. M.,

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IN the consideration of no other question are law and medicine so greatly at variance, as that of insanity, and in no other matter is it so important that there should be perfect harmony between them. On other occasions they dwell at peace one with the other, but let insanity be the point at issue and immediately each profession appears in battle array. Law scoffs at medicine and Medicine snaps her fingers defiantly at the law. The law believes that insanity is to be established by a process of logical reasoning, premised upon the facts in the case; while medicine seeks to establish the same mental condition by virtue of a source of information and knowledge not depending upon the facts in the case and not possessed by the law. Both are right and both are wrong, and the following paper, written from the standpoint of both law and medicine, and viewed with an eye not singled to either profession, is an attempt to so limit the medical definition and enlarge the legal opinion; to so mix the logic of the law and the pathology and physiology of medicine as to establish, if possible, a common ground upon which both professions may stand united. This neutral territory, however, cannot be established unless

some formal concessions are made by both parties. Will these concessions be allowed? Or has protracted dissension so blinded reason and hardened the heart that there can be no reconciliation? For the time being let us forget what we have contended in the past. Let us ignore what we have outlined and prophesied for the future. Let us hold even our present beliefs in abeyance and, considering the matter calmly and dispassionately, let us see if insanity can be limited safely to those mental conditions only, which have their basis in a delusion.

In pursuing the study of insanity I have sometimes felt that the subject as usually presented was not nearly so clear as it might be, and further investigation has led me to believe that possibly this haziness arose from the fact that the term has been used indiscriminately, and was employed to designate a number of mental conditions which had so little in common as to suggest the advisability of restricting its meaning to those forms of mental disease only, which seem to be intimately related.

For years alienists have endeavored to define insanity. Language has been explored from pole to pole in a vain attempt to discover the phrase, or phrases, which would fitly describe the condition, and men of learning have sought to construct ingenious groupings of words, or cunningly devised expressions, which would reveal the truth, the whole truth and nothing but the truth, and all have failed. If the definition seeks to be brief and concise, it leaves so much to be said that its value is doubtful, while if it aims to be comprehensive and complete, it leads the reader a wild and never-ending chase

"O'er rock and crag and bog and fen,"

until the mind falters and droops in contemplating the illimitable multitudinosity of its own abnormal manifestations, and stands terrified and dismayed at the diversified enormity of its own offenses.

Most conditions can be defined, and the ease with which definitions can be supplied to those things we know the best, has led some to intimate that the inability to define insanity

acceptably comes from the absence of a full and complete understanding of the situation; that we are attempting to place metes and bounds to a subject whose limitations are unknown. It is true that our knowledge of insanity is incomplete. Many regions are still unexplored, and much remains to be known, but I am not sure that this lack of knowledge is the cause altogether of our inability to more accurately define this condition.

CLASSIFICATION OF MENTAL UNSOUNDNESS.

The term insanity, like charity, covers a multitude of conditions, and there is no doubt that in our attempts to crowd so many things under its protecting folds the fabric has been unduly stretched. Dr. Gray, formerly Superintendent of the State Lunatic Asylum, at Utica, N. Y., speaking of the tendency to call every case of mental unsoundness insanity, expresses himself very forcibly on this subject, and these words, coming from an alienist of international reputation, are entitled to consideration. "Hence, every odd look, every downcast and weeping eye, every silly laugh, every eccentricity of conduct, every hypochondriacal turn, every physical weakness, every heat of passion, every natural frenzy of excitement, every impulse to evil act, every defect of self-control, is twisted and tortured, by sympathetic friendship or by empirical science, into some significant index of insanity. This will never do. It is contrary to reason, to justice, to social protection, to all human experience, and to all divine law, however conformable it may be to some fanciful and super-humane speculations that have the air of science without the truth of it. There must be a staunch safeguard somewhere."

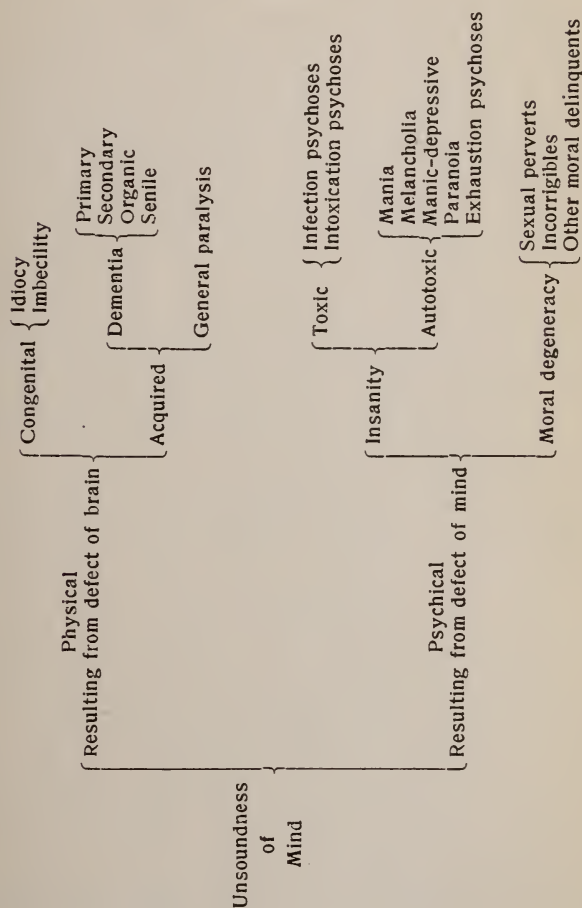
Is it not possible that under the term "insanity" we have combined conflicting conditions, which refuse to be resolved into the same general principles? Can all cases of mental impairment be reduced to a common denominator? Is not the difference existing between, say, acute mania and complete dementia, too marked and too pronounced to permit of any closer relationship than that of cause to effect? If this is true, then is it possible to give a clear and concise

definition of a cause which will also include a clear and concise definition of its effect? In attempting to include both cause and effect in one and the same definition are we not more than likely to arrive at a definition of neither? I may be wrong, but I believe that the term *insanity*, should be reserved to describe a mental condition which has nothing in common with dementia or other forms of mental enfeeblement, either in its origin or in its manifestations. I believe that in restricting the meaning of insanity, and decreasing the extent of territory it now covers, as well as limiting the number of mental conditions for which it now stands sponsor, we can arrive at a clearer idea of insanity itself, as well as a better knowledge of its illegitimate offspring, for whom we will find homes elsewhere. For purposes of discussion I submit the classification in table on following page.

In this table I have used the term, "Unsoundness of Mind," to cover all abnormal mental conditions. This is divided into those abnormal mental conditions which have their origin in a defective brain, and those which arise from some derangement of the mind. I wish here to make a clear and lasting distinction between these two sources of mental unsoundness. Those conditions which have their origin in a defective brain have nothing whatever in common, technically speaking, with those arising from a defective mind. Both may exist in the same individual, and at the same time, but their relationship is no closer than this. Mental impairment in one case comes from obstruction to mental operations, by means of organic impedimenta resulting from degenerative changes in the brain; while mental impairment comes in the other case from an abnormal mental attitude which has its basis in a delusion. One results from *obstruction*, the other from *estrangement*. In one, reasoning is characterized by its weakness and tardiness because of deficient knowledge from which to draw deductions, and the impossibility of free and unhampered action; while in the other, reasoning is characterized by false conclusions drawn from false premises, and the persistence with which these conclusions are deduced. One has a physical basis; the other a mental one.

The unsound conditions of mind which result from a defective brain are divided into congenital, or non-developmental, and acquired, or degenerative. The dementias I

TABLE I.



have placed among the conditions resulting from degenerative changes in the brain for reasons which will appear later.

General paralysis is universally regarded as a disease of the brain, and there can be no possible reason for classify-

ing it as a form of insanity. True, it is almost always accompanied by insanity, but the general paralysis, with its motor complications, is purely and wholly organic, and does not bear the remotest relation to the insanity with which it is so frequently associated. The degenerative changes which occur in the brain in general paralysis seem to strip that organ of its powers of resistance and to render it peculiarly susceptible to the invasion of delusive ideas. So long as delusions are present the general paralytic is insane, but the insanity is caused by the delusions, and not by the trembling hand, or "thick tongue," or the occasional attacks of apoplexy. The paralysis is the condition from which the patient dies, and the thing upon which the eye should be fixed; the insanity is only incidental. Instead of it being called general paralysis of the insane, it should more properly be named, the insanity of general paralysis; that is if insanity exists, for I can conceive of the possibility of a man passing through all the physical stages of general paralysis without presenting any evidences of insanity, though this, probably, seldom occurs.

Insanity and moral degeneracy I have classified as the two divisions of derangement of mind, and following these the usual forms of insanity, except that I group them as toxic, and autotoxic, though the reasons for so doing cannot be given here. The classification as given in this table may not be above criticism, but I offer it for the consideration of alienists with the hope that it may prove to be of some service even though imperfections may exist.

As an introduction to what I may say on the subject I give the following reasons why dementia should be differentiated from insanity, the details of which will be worked out in subsequent pages.

1. Insanity, based on delusions, and dementia, have not a sufficient number of elements in common to allow both to be included in the same definition.

2. Insanity is a *derangement* of reason; while dementia results from *obstruction* to reason.

3. Insanity is characterized by false conclusions; de-

mentia is characterized by imperfect, or inadequate, conclusions, but not necessarily false.

4. The false conclusions of insanity are the logical results of false premises; the inadequate conclusions of dementia are the illogical results of true premises.

5. In insanity the judgment is diverted, by delusive influences, from following a true course; in dementia it is weakened, and impaired, and unable to hold to any course.

6. In insanity the will is strong and unduly prominent, either to do, or not to do; in dementia it is weak and, in many cases, practically obliterated.

7. Insanity is an unequivocal condition, either positive, or negative; dementia is neither, but is indifferent, apathetic and unconcerned.

8. Insanity sails with a new chart, and a new compass, straight for a new port; while dementia has lost both chart and compass, and sails for no place in particular, but drifts into any harbor that lies in its way.

9. In insanity the cause of the disorder is located in the mind itself; in dementia the cause is located in the brain.

10. Insanity is psychical in its origin; dementia, physical.

WHAT IS INSANITY?

The consideration of the subject in hand, however, cannot stop with the enunciation of general principles; we must go into details. If imbecility, and the various dementias can be eliminated as forms of insanity, and the latter so restricted as to include only those forms of mental disorder having their basis in delusion, I believe that a great deal of confusion now existing can be avoided. Let us see if the plan outlined is feasible. In the first place, then, who *are* insane? By what means do we detect mental alienation, and how are we enabled to say this is, and this is not insanity? Can we speak definitely in the matter, or do we only voice an opinion? Must we draw our conclusions solely from the actions of the individual, even while realizing that actions are more frequently vicious

than they are insane? Sir John Nicholl says: "I look upon delusion and insanity to be almost, if not altogether, convertible terms. In the absence of anything in the nature of a delusion, the supposed lunatic is in my judgment not properly or essentially insane." This is a legal dictum but I heartily concur in it for, looking at the matter as I may, from a legal as well as a medical point of view, I cannot see how there can possibly be *real* insanity except as it has in its basis a delusion. I say *real* insanity advisedly. The condition known as insanity sustains such complex relations with the world at large that it, unlike physical diseases, must be viewed from various standpoints. A condition of mind which would warrant commitment to a hospital for insane, for medical treatment, or would justify incarceration in the same institution to prevent injury to others, would not necessarily be sufficient to establish insanity when pleaded as a defense to crime. A man may be so disagreeable as to make life a burden to his friends and associates, without being insane. He may be an object of general ridicule, and his peculiar actions may incite either the laughter or scorn of the observer, without being insane. He may be engaged in all sorts of street fights and saloon brawls, and even stain his hands with the blood of his fellowman, without being insane. He may desert, or mistreat his wife, starve his children, or filch the pennies from a dead man's eyes, without being insane. He may do anything and everything without being insane. His actions are no evidence of insanity. More than this, his mental condition may be such as to excuse all his actions, short of actual crime, and yet not be insane.

Consequently, while there are cases of mental aberration which call for incarceration because of their viciousness; and others who, by virtue of mental incapacity, are unable to cope with the world and thus require, and deserve, to be cared for in hospitals, it follows that the laws relating to the commitment of individuals to these institutions must be broad in their conception of insanity, and extended far beyond the limits of the scientific or technical idea. Indeed, the law itself views with very different feel-

ings the insanity which is committed to a hospital, and the insanity which claims irresponsibility for murder.

There are many patients confined in state hospitals who are not scientifically or technically insane. If they were there would be more recoveries. They are degenerates, and never did, and never will, arise to the dignity of insanity. Imbecility is not insanity. Mental weakness of any kind is not insanity. Sheer mental weakness from disuse or non-use of the mind is no more insanity, than muscular weakness arising from a like cause, is physical illness. There are all grades of mental weakness in men just as there are all grades of muscular strength. That one man has been endowed with, or has developed, ten-fold more muscular strength than another, is no evidence that the latter is ill. That one man has been cheated by nature of his mental qualifications; or has been unable or unwilling to make the most of the trifling gift she did bestow; or, indeed, by vicious practices or unseemly habits has quenched untimely the fire once kindled, until he can no longer retain his position in the battle for existence, but must be cared for by friends, or in a state hospital, is no evidence in itself of insanity.

Blandford says: "We cannot describe or define under the one word "insanity" the whole mass of disorder to be seen within the walls of a lunatic asylum for, among these inmates, we find congenital idiots and imbeciles varying greatly in mental capacity, persons suffering from organic disease of the brain, from the results of epilepsy or syphilis, *and besides these a number whose minds are disordered and subject to delusions and hallucinations.*"

During the past year there were admitted to this hospital, 256 patients, and of these, 171 could be technically called insane, while 85 were made up of imbeciles, epileptics, and uncomplicated cases of dementia. Not one of these 85 entertained a delusion, and few of them possessed sufficient intelligence to formulate a false belief. Many of the 171 classed as insane were imbeciles, epileptics and demented, but these gave evidence of insanity in addition to their brain impairment, while the 85 presented no features

differing in any way from ordinary imbeciles, epileptics and demented except in the extent of their affliction and the presence of an element of viciousness, which made it impossible for them to be cared for outside the hospital. These 85 patients were divided as follows:

Hysteria	2.
Imbecility	30.
Epilepsy.....	14.
Senility	8.
Organic dementia.....	8.
Primary "	14.
Secondary "	9.
Total	85.

Cases of dementia and imbecility, and insanity, resemble each other only in this, that they are all out of harmony with their environments, and are taken care of in hospitals because they are incapable of taking care of themselves and cannot be cared for by friends.

DEMENTIA NOT INSANITY.

Is insanity, then, to be defined simply as a condition which requires care on the part of the state? Or as a condition of mental enfeeblement, or of disordered mind, or of no mind at all? Must it be made to cover all the mentally halt and lame and blind found in state hospitals? If the mentally halt are insane, must the mentally blind be necessarily insane as well? Does the oculist make no distinction between defect in vision and absence of sight? Are myopia and blindness convertible terms? Is the knowledge of the oculist founded on a more scientific basis than that of the alienist? If so, let us hasten to correct the error. Let us endeavor to arrive at a more definite, and consequently scientific, idea of insanity. Let us no longer call dementia, insanity. Until we include blindness in the classification of diseases of the eye let us avoid giving dementia, either primary, secondary, organic, or senile, as a form of insanity. Partial, or complete loss of sight may come from any of the diseases of the eye, or from disease of the

brain, but the loss of sight is the condition following the disease, not the disease itself. And so a partial, or complete loss of mind may come from any of the forms of insanity, or from disease of the brain, but the loss of mind, whether complete or partial, is the condition following the insanity and not the insanity itself.

At the same time a disease of the eye may accompany a partial loss of vision, or even be associated with blindness, without there being any difficulty experienced in distinguishing between the disease and the loss of vision. And insanity may be associated with dementia without the identity of either being changed or lost. Dementia, in any and all its forms, proclaims a disease of the brain—not of the mind. The mind may become disordered, or deranged, but never obliterated, or weakened, while the brain remains intact. In the idiot the paths of mental conduction have never been opened; in the dement they have been closed. One is non-developmental, the other degenerative. That is the only difference. One never opened its gates; the other has long since closed its doors. Disease has darkened every window of the brain and barred every avenue of entrance or exit. The mind, by virtue of this process of obstruction, may be deaf, dumb and blind to the world at large, but not insane.

M. Sacase, in *American Journal of Insanity*, Vol. 10 page 277, refers to this matter thus: "The term imbecility and dementia are frequently used as merely translations of each other, but although they agree in some respects, they differ essentially in their origin—the one being acquired and the other original. *They are also distinguished from mania and monomania*, since in these there is a vicious and abnormal connection of ideas, whilst in the other, ideas have never been associated or have ceased to be so. In one case there is *perversion*, in the other, *inability*."

That dementia follows insanity comes only from the degenerative changes produced in the brain by reason of the insanity. It is not the fag end of insanity, nor do they bear any relation to each other, except that of a cause and an effect, through the intermediary influence of the brain.

In other words, insanity is the *cause* of degenerative changes in the brain, dementia the *effect*. Few cases of dementia, however, result from previous insanity. It comes from the use of alcohol, from syphilis, and from the natural processes of brain degeneration incident to old age. The number of cases of secondary dementia, or dementia resulting from the ravages of insanity, are very, very few in my opinion. I know that a large per cent of the demented in hospitals for insane are classed as cases of secondary dementia, but I question the diagnosis. I can much more readily believe that they are cases of primary dementia of long standing, whose original condition of dementia was not differentiated from the insanity which accompanied it. But in later years, when the insane condition had disappeared, the truth not having yet been recognized, the dementia became prominent and was assigned a name to indicate that it was a sequel to the insanity. The dementia was not secondary in time so much as secondary in consideration; nor so much a result of the insanity as of a careless examination of the patient, coupled with the practice which then existed and still exists, namely: calling dementia, insanity.

WHEREIN PRIMARY DEMENTIA DIFFERS FROM INSANITY.

Primary dementia, as I understand it, is a condition of premature mental decay caused by a cessation of brain development, and which may or may not be accompanied by insanity. It occurs generally at the period of pubescence and frequently follows a precocious childhood. Up to the time of puberty all the dynamic forces of the body seem to be centered in the brain, but at this eventful period a change occurs in the vital currents and the developmental forces of life, which hitherto seemed to expend all their energy upon the brain, now forsake it, and their rich stores, which were lavished so abundantly upon the mind, are now, by some trick of nature, poured with equal profusion into the physical structure, so long neglected. New sluice gates have been opened and the vital currents have been deflected into other fields. The body grows stronger; mus-

cles develop; the chest expands; the physical structure is now to be matured for purposes of procreation. The ordinary brain can endure with equanimity this act of dynamic desertion, but in the cases we are considering, by virtue of instability of structure, to be abandoned is to be lost.

All that occurs at this time is scarcely known, but the brain has apparently rounded out its career and the day of its glory has departed. It develops no more, and the mind, groping about to discover new opportunities for mental expansion, finds itself hemmed in on all sides by the unyielding walls of brain obstruction. Further growth is impossible, by reason of its changed environment, and the mind can only struggle as best it can to adjust itself to the change in its fortunes, and to console itself with the thought of "what might have been" had it chosen a better and more enduring habitation. Except to fashion itself to its restricted space and conform its activities to its limited opportunities, it has changed little or none. It may have little to say to the outside world and may say it very poorly, but what can be expected of a mind that has been denied all opportunities for development? How can it reason without further knowledge and how secure further knowledge walled up in a brain such as this? The brain has been stricken with palsy and the mind can only accept the situation, which is nothing to its discredit. The mentality of a Webster, placed in such a receptacle, could do no more.

Can this condition, uncomplicated and in itself, be called insanity? The changes in thinking, feeling and acting are those only which come from a decrease in functional power; but is this the change which is the keynote of insanity? Is the gradual *decrease* of mental power in primary dementia any more of a change than the gradual *increase* which comes with the usual and natural mental development of the individual in health? Is the *prolonged departure* from the usual way of thinking, feeling and acting that distinguishes the adult from the infant, insanity? Well, then, is the prolonged departure from the usual way of thinking, feeling and acting which makes the character-

istic mental difference between manhood and old age in itself insanity? I think not. The one is as much to be expected, and follows as naturally and consistently as the other. The presence of a delusion in either case would constitute a good and sufficient basis for insanity, but the insanity would be a condition in itself, separate and apart from the dementia with which it is associated.

Would it not be better to distinguish between insanity, and simple and uncomplicated dementia, whether primary or secondary? Would it not give us a more intelligible foundation upon which to base a scientific study of insanity than the ground we now occupy, which is so uncertain in its stability, and so unsteady and variable, in its continual shifting to meet the new exigencies forced upon it by virtue of the extensive field we seek to cover with a single word?

I cannot help believing that not only idiocy and imbecility should be differentiated from real insanity, but primary dementia as well. To my mind the changes occurring in the latter have nothing whatever in common with the mental changes which occur at the inception of acute mania, or acute melancholia, or any other form of real insanity. Primary dementia is based on degenerative changes in the brain, and the condition is practically incurable. Insanity is based on a delusion, a false conception, and its continuance, or curability, depends upon the continuance or disappearance of the delusion. If primary dementia is permanently cured it is scarcely primary dementia. It is more than likely a case of mistaken identity. Mentality never regains its pristine purity when the brain is once stricken with the blight of primary dementia. There may be improvement, and sometimes, an apparent recovery, but this is usually only temporary and seldom, if ever, does the patient remain away from the hospital permanently. The brain cell may retain some of its integrity, and this may appear to good advantage when observed under the most favorable circumstances, but it never recovers its original functional activity. These people may, and do, recover from the accompanying insanity, but the brain remains impaired, inviting new attacks, and

the mind never repossesses its former strength and activity.

Periods of stupor, occurring in primary dementia, are more than likely the result of a delusion, rather than a part of the dementia itself, for the stupor is more apparent than real, as evidenced by the accuracy with which the stuporous individual can relate, subsequently, everything that occurred during the attack. However deep the stupor in which he is wrapped may seem to be, he is much wider awake to his surroundings than is usually believed, and, however prolonged the stupor may be, or how remarkable the various aspects it may present, a close observance of the individual will reveal a considerable amount of "method in his madness" after all. When these cases tell you, after recovery, that they heard everything that was said during the attack, and fully comprehended the situation; that they wanted to reply to questions asked, and to do what was requested, but *something* prevented, does it require any great stretch of the imagination to conclude that this "something" had its basis in a delusion? In my own mind I am convinced that the stupor in these cases is an evidence of insanity, rather than an indication of dementia. Indeed, many cases of so-called primary dementia may not be dementia at all, but a condition of apparent stupor, having its basis in a delusion, and which disappears with the disappearance of the delusive idea. Are these the recoverable cases of primary dementia?

All cases of primary dementia are not insane, just as all imbeciles are not insane. Cases of primary dementia admitted to hospitals are in nearly every instance attended with insanity, but this insanity stands out more or less prominently and can easily be separated from the dementia with which it is associated. There is a vital and essential difference between an individual who believes that his right leg is made of glass, and one who, by virtue of early brain degeneration, is incapable of believing anything with any degree of certainty. There is the same degree of difference between the insane idea that grass is red, white and blue in color, and no idea at all, as there is between no idea at all, and the sane idea that the color of grass is green. In other words, there is the same distinction existing between

insanity and complete dementia that exists between complete dementia and sanity.

Primary dementia can scarcely be held to be a form of insanity for there are many, many cases of early mental failure occurring at, or about, the time of puberty, which are never committed to the hospital, and there is no necessity for doing so. The primary dementia is present, but there is no insanity. They are the precocious children who later prove to be the dullards in the school. They develop into the people who never do well and who are a constant and perennial disappointment to themselves and to their friends. They are the individuals whose moral lapses give rise to much and frequent litigation and in whose prolific fields wild oats spring up again and again in a never-ending succession of crops. Sometimes they develop insanity later, in fact their condition of mental unsoundness invites insanity, but even then the insanity and dementia, it seems to me, appear as two conditions, not as one. To avoid confusion, primary dementia, as well as secondary, organic and senile dementia, must be considered as having their basis in degenerative changes occurring within the brain, and not in any derangement of the mind.

THE BASIS OF INSANITY.

Insanity can never be extended to cover every abnormal and unusual mental condition as alienists are now attempting to do, and so long as we insist on doing so nothing but confusion and uncertainty need be expected. Nor is it sufficient to simply eliminate imbecility, and primary, secondary and senile dementia. We must do more. We must clarify the atmosphere surrounding insanity itself. Whenever we try to establish a form of insanity called intellectual insanity, which is based on a man's manner of thinking; and another form called emotional insanity, based on the way he feels; and still another form called violent, or homicidal insanity, based on the way he acts, we are only laying traps for our own feet and pitfalls for our neighbor. There can be but one basis for insanity, indeed there needs to be but one, no matter into how many divisions the evidences of

insanity may be formed. The one basis of insanity is *what a man feels*; not the light and evanescent feeling or emotion ordinarily experienced, but a feeling so intense as to become an absolute conviction, an innate sense of assurance, which needs no argument to establish its position. Ordinary emotions are founded upon, and have their existence in, a sense of pleasure or of pain. This is the source and origin of their being. An emotion, according to Webster, is "an excitement of the feelings, whether pleasing or painful; disturbance or agitation of mind caused by a *specific exciting cause* and manifested by some sensible effect on the body." This feeling which lies at the threshold of insanity is not a simple emotion. It is more than this; so much more that there should be a different word to express it. It lies deeper; it is more intense, and it has no specific exciting cause. It may carry with it either the sensation of pleasure or of pain, but these are its creatures rather than its cause, and are only incidental. Indeed, the threads of pleasure and of pain sometimes become so interwoven and entangled that their identity is lost, or so obscured as to become unrecognizable, and pain becomes pleasure and pleasure, pain. Who can look upon the excessive demonstrations of unbridled grief without wondering whether or not the accompanying sensation is not more of pleasure than of pain? Who can contemplate the hypochondriac without feeling that he finds great pleasure in the discovery of some new discomfort or some new disease? Who can listen to some melancholiacs without believing that they derive a morbid pleasure from the maledictions they heap so abundantly upon their own devoted heads, or from the sackcloth and ashes they voluntarily assume to endure?

This deeper feeling is not a definite sensation, but a fundamental tone. It is the *prevailing tone of feeling* of sanity swollen to gigantic proportions, and it dominates all intellection, all acts and all emotions; and until it *does* dominate mentality no man can be safely called insane. Its first act of aggression is to bind the intellect. There is no other method by which it may gain absolute control. No man will voluntarily act in opposition to the dictates of his own

judgment. Warp the judgment to fit the act and its consummation is assured. Men are but puppets; the idea is the force which shapes and molds their lives. Whether it is an idea instilled at a mother's knee; or driven home by the ferrule in the hands of the master of the village school; or one that was sown in the soil of bitter experience and watered by the tears of repentance; or an eternal verity planted by the hand of the Almighty; or a delusion raised into consciousness by an unseen hand; these are the living and potential forces which fashion a man's existence. Let the idea be but evolved—let the delusion be but born, and the change in the thoughts, acts and emotions will follow in logical sequence.

In this tendency to dominate mentality lies the danger of an exaggerated fundamental tone of feeling. When it once implicates the judgment its mission is complete. It spends no further force upon the emotions or the will; it simply supports and controls the idea which the judgment has sanctioned; and this idea, created by virtue of a necessity, is amply sufficient for all subsequent needs. The idea regulates the processes of reasoning; it governs the future deliberations of judgment; it guides the actions; it controls the emotions. *But deep down beneath it is an all-compelling force which commands the situation.* The acts and the emotions are but the slaves of a mightier power, making no distinction between the false and the true, only more ready, perhaps, to obey the commands of a tyrant, than the milder requests of a considerate and more reasonable master. Insanity, then, may be said to be the expression, by means of the acts and the emotions, of what a man thinks, as determined by the quality of the fundamental tone of feeling, instead of by the dictates of a normal and unbiased judgment.

Tomlinson says, in a paper read before the 59th. Annual Meeting of the American Medico-Psychological Association, "When we take into consideration that insanity is the manifestation of *alteration*, not *destruction* of function, we can appreciate that the activities involved are the same in amount and kind, in both normal and abnormal cerebral functioning.

In the one case they represent the response to external stimuli, the effect of which is habitual; while in the other they are excited by centrifugally generated stimuli, more or less out of accord with external relations. There is no abstract difference (he says) between the conduct of the sane and the insane! The difference lies *in the nature of the experience* which gives rise to the conduct."

What, then, *is* insanity? The word itself means, not sane, or not sound; that is, a mind that is unsound. It is important, however, to make a distinction between soundness of mind, and the sum total of knowledge. A man may be wise beyond his years, or a congenital idiot, with no suspicion of insanity in either case. The aggregate of knowledge is not a test for insanity. A man may be ignorant, nay, he may even be illogical and unreasonable without being insane. Many voting precincts would be emptied if all ignorant, illogical and unreasonable men were committed to hospitals for insane. Many business failures are the result of illogical reasoning. Either false premises were accepted as true, or wrong conclusions were drawn from imperfect reasoning or from imperfect knowledge. These men may be regarded as incompetent or incapable, but not one could be rightly called insane from these facts alone. And yet, insanity is illogical and unreasonable, and adopts false premises, or draws false conclusions from premises that are true. How can these two conditions be so similar and yet so widely apart? What is the distinguishing feature which marks a man as insane? What is the peculiar quality permeating insanity which can be relied upon as differentiating this mental condition from all others? Not the amount of knowledge; not illogical reasoning alone; not viciousness; but simply this: In sanity the judgment is guided and controlled by the intellect, and its conclusions, whether good, bad or indifferent, must be regarded as sane. In insanity the judgment, as well as the intellect, is dominated by a fundamental tone of feeling, and the whole mental life partakes of the peculiar quality of this basic sense.

CAN THERE BE INSANITY WITHOUT DELUSION?

I believe that insanity is a mental attitude based upon

an exaggerated fundamental tone of feeling, which gives birth to a delusion; that this delusion is the source from which this mental attitude derives its general characteristics, as well as its local color, and that without a delusion, either expressed or concealed, there can be no real insanity. It is true there are occasional cases of insanity in which no delusion can be discovered, and there are some who stoutly contend that the undiscoverability of a delusion is proof positive of its absence. I do not believe, however, that this opinion is held by those who have had long years of experience in dealing with the insane. But there are other cases where conclusions regarding the presence or absence of a delusion can not be drawn with certainty; where no delusion finds expression and there exists no evidences of its concealment. No statement to the effect that insanity is always associated with a delusion can stand, if there are known to be cases of insanity in which no delusion exists. The establishment of the latter proposition would nullify the former, in a measure at least. But let us see upon what ground the statement is made that there have been cases of insanity without delusions. It may be possible that the assertion rests upon no firmer foundation than the one it seeks to qualify.

In the first place, was the examination conducted by a man of experience? All men do not determine the presence of the *physical* symptoms of disease with equal facility nor with equal success; and *mental* symptoms, likewise, do not respond to all inquirers alike. Was there no possibility of the delusion being concealed? Was there nothing to indicate that the patient's manner of thinking, feeling and acting had its basis in something abnormal? Was there any possibility that the patient was unable, by reason of the confusion attending a recent mental upheaval, to formulate a statement of the true condition of affairs? Would not the replies of the patient, when he says that he cannot describe his condition, that he does not know what causes it, and that he has made every effort to break away from the feeling, but cannot do so, indicate that the condition is not spontaneous, but must have a cause? If he

feels that he is submerged in an emotional sea, or compelled to a certain course of action, or led to doubt where he once believed; what is it that submerges, and compels, and leads? Is it nothing because the patient has not yet recognized it, or, having recognized it, is unable to put his knowledge into words? Or, in the absence of all positive knowledge, is there any greater reason for saying the patient has no delusion, than for saying he has? Under these circumstances would one statement carry any greater weight of authority than the other?

McFarland, in a paper read before the American Association of Superintendents of Institutions for Insane some years ago, refers to the probable existence of delusions in all cases of real insanity, in these words: "Everyone realizes how few of the delusions of the insane mind are ever revealed, and how readily they are revealed under one set of circumstances and concealed under others. All insane asylums abound in cases of unquestionable mental disease, where its palpable manifestations are so obscure that the unskilled observer would doubt its existence. A certain suspicious reserve, a mysterious shyness of manner, some haughtiness of bearing, or something marked and singular in the tone of voice and manner of utterance, some strange attachment to some particular position or seat, or special stress applied to the doing of some act, may be all that distinguishes the individual from other men. *Yet one, guided by experience, has no hesitation in declaring such cases to be instances of a latent delusion*, and is prepared for the sudden exhibition of extreme or violent acts, of which any of these almost unobserved antecedent peculiarities furnishes the explanatory key. In such cases the extent of the disease is not at all measured by what appears on the surface, and those who treat the insane are constantly surprised by the revelations of recovered patients as to the multitude and singularity of the delusions which possessed them while in a state which seemed, for all discoverable sign, so little removed from full enjoyment of reason."

As an illustration of the mistake frequently made of

ignoring the possibility of a delusion being present, simply because it does not challenge attention, and, moreover, making no effort to discover one because the case had been diagnosed as insanity without delusions, Dr. McFarland continues, referring to a case under his care: "She was not discharged at the time. She proposed subsequently that she be allowed to continue to write her book. I gave my consent, and when she got fairly into the work, the whole delusion, which had lain concealed in her case for eighteen years, became fully developed, and it showed that all this perversity of conduct arose out of one single delusion; and the delusion was, that in the Trinity distinctions of sex had to exist, and that she was the Holy Ghost. That there was a God the Father, Jesus Christ the Son, and she was the female Holy Ghost. It appeared, moreover, unmistakably in her writings that this delusion had possessed her for eighteen years, growing and increasing upon her, and giving origin to all this perversity of conduct, clearly and connectedly as I now see it, making out a case perfectly consistent with the idea of *an original intellectual delusion* underlying and producing all the so-called phenomena of moral insanity."

DEFINITIONS OF INSANITY.

But, admitting that there *is* no delusion present, there still remains another horn to the dilemma, namely: Is the individual *insane*? Who can say? The determination of insanity today is not a positive conclusion, but a matter of opinion. There is no rule by which it can be measured. There is no standard to which it can be fixed. One expert, grown gray in the work, and with long years of experience to his credit, will testify that the prisoner *is* insane; while another expert, grown equally gray in service, and with similar advantages in the way of experience, will testify with corresponding certainty that he is *not*. Here is the supreme test of all definitions of insanity, for a definition that will not stand in law is no definition at all; it is only a makeshift, which serves all purposes with celerity, but none with fidelity.

A prolonged departure from a man's usual method of thinking, feeling and acting is said to constitute insanity. But this is not enough. A man, steeped in iniquity and a brother to vice; a reviler of Christ and an enemy to all that is virtuous and good, enters a house dedicated to the worship of God. The service, in some mysterious manner, strikes a cord which haply responds, and for the first time he thrills with the touch of the divine. He comes again and again, and at last the hand of a saving grace is laid upon his head; his heart is attuned to a new song, and he experiences the sweet peace which comes at such times to the troubled soul. He is a changed man. He is born again. He thinks no more as he used to think, nor does he feel or act as before. There is a prolonged departure, it is hoped, from his former method of thinking, feeling and acting. But this is not insanity; there is no delusion here. Men are permitted to change their opinions, and their feelings, and their actions; to make this departure as prolonged as they desire, and to freely adopt any views or any ideas they may choose, without any implication of insanity, unless the change of opinions, or adoption of ideas has been at the instance of a delusion.

Many alienists prefer the following definition, and some believe in its accuracy: Insanity is a prolonged departure from a man's usual method of thinking, feeling and acting, not due to external causes. "Not due to external causes" is added as the saving clause. In other words, any mental condition due to external causes is not insanity. This would be an easy solution of the problem if true, but what about disappointment, or grief, or traumatic injury of the brain? Do these ever cause insanity? Are they not due to external causes?

Another definition much in favor is as follows: A prolonged departure from a man's usual method of thinking, feeling and acting, without adequate external cause. Here "without adequate external cause" has been formulated to avoid the criticism evoked by the former definition. It was recognized that if a man was overcome with grief, by reason of the death of a relative, his unusual conduct would not

be insanity because there existed, in the death in the family, a good and sufficient cause for his condition. According to this last definition no mental condition can be called insanity so long as there is an *adequate* external cause to account for it. This definition is better than the other, but is it all that can be desired? Is alcohol an external cause? Is it adequate to account for the condition? Is alcoholic insanity a myth?

There is still another definition, similar in every way to the one just considered, except that the words, "due to disease of the brain," are added. This means that insanity is the prolonged departure, as above, that it must not be due to an adequate external cause, and that it is the result of *disease of the brain*. Here one must give up in despair, for this definition, the best by far of all, has completely eluded its pursuers by running into a hole out of sight. The statement that insanity is due to disease of the brain is all right when propounded as a theory, but it is all wrong when offered as a definition. Some believe this as a theory, while many do not. Those who believe it have been unable to demonstrate it, and, finding, even, gross pathological changes in the brains of a thousand insane patients would be no positive evidence of disease of the brain in the particular individual before you. Defining insanity by the assumption of a condition which is not universally believed, and which cannot be demonstrated, can only be regarded as an opinion, entitled to all the respect and consideration due to a personal opinion, but not to the authority of a definition.

Tomlinson says: "It is a great misfortune that the brain is not so carefully studied in those dying from typhoid fever, pneumonia and general sepsis, as it is in the insane. We are too apt to take for granted that a certain condition found postmortem in the brain of a person dying insane is the cause of the insanity; losing sight of the fact that we do not yet know that the changes we find do not also exist in the brains of the sane who die under similar physical conditions. Indeed, our observation of the microscopic changes in the brain and its coverings, among the insane,

and our study of the histology of the cortex, would tend to confirm this doubt; so far as any changes are apparent, aside from those present in dementia (note the distinction made pathologically between insanity and dementia) and even these changes can often be found in advanced or premature senility, where no mental disturbance has existed. It is the belief of the writer (he continues) that the time will come when we will recognize the histological changes, found in the brains of the acutely insane who die, as the result of the physical conditions which preceded and were associated with the insanity, and not as the cause of the mental disturbance."

But what of the man without the delusion? Is he insane? It is useless to rely upon the definitions of insanity. If one says he is *not* insane and another says he *is*, who shall decide? *How* shall they decide? If, in order to save my case, I pronounce him sane, who shall say me nay? This much I grant: If the examiner will demonstrate the absence of a delusion to a reasonable degree of certainty and, at the same time, furnish evidence that the man is insane, why, it will be useless for me to go further, for a careful statement from him as to the methods employed in securing this satisfactory evidence of insanity would render any further definition of this condition unnecessary.

The definition of insanity which I have given as my own is not above criticism. It is only one more added with the hope that it may prove to be better than any now in use. It establishes insanity by the presence of a delusion and, while the discovery of the delusion is not always a simple process, it is not, I believe, attended with any greater difficulty than is met by every physician in determining the presence of many of the symptoms of physical diseases. It yields, of course, most readily to experience and it is a delusion scarcely worth the name that can long succeed in successfully escaping detection at the hands of an expert. This definition is surely clear and definite, if that is any merit, and its acceptance can be refused only on the grounds that the foregoing pages have not fulfilled their mission. Those who still continue to regard imbecility

and dementia as forms of insanity cannot accept this definition, but if, after all has been said, the reader will dwell upon the thought a little longer, I believe that he, too, will conclude, that without a delusion, either expressed or concealed, there can be no real insanity.

In the case of Elizabeth Heggie, charged with the murder of her daughter, which is so ably and extensively reviewed in the *American Journal of Insanity*, Vol. 25, Dr. Cook, physician of the asylum at Canandaigua, N. Y., testified as follows: "He was of the opinion that the defendant was of *unsound mind*. He was unable to say that in his opinion, positively and without qualification, using the term 'insanity' in its ordinarily received acceptation, she was then *insane*; he used the words 'unsoundness of mind,' not 'insanity,' making in this case some distinction—not using them as precisely convertible terms. He entertained a doubt about there being a delusion, and it was partly on that account that he hesitated to pronounce positively upon the insanity."

Dr. Cook recognized that there could be conditions of unsoundness of mind which were sufficient to relieve an individual, committing a crime, from all responsibility, without there being any evidence of insanity. He also recognized that real insanity could not exist without the presence of a delusion. Could he have satisfied himself that the delusion was there, even though it might never have been formulated into words, he would have unhesitatingly pronounced her insane. Entertaining a doubt regarding the presence of a delusion he must necessarily entertain a doubt of her insanity.

In the same trial Dr. Butteo, Superintendent of the Hartford Asylum, in his testimony, "was not convinced that the defendant was insane; but the evidence showed him that there was a state of mental unsoundness and debility which created in his mind a strong doubt of her sanity." When the Doctor says that she was not sane, nor was she insane, it would seem at first glance that he had used contradictory terms; and the terms are contradictory according to their usually accepted definitions. "Insane," to be sure, would mean anyone not sane, if we rely simply upon the dictionary, but every physician of experience realizes that

there are many men who are neither sane nor insane. Idiots, imbeciles and demented are all of unsound mind, and are neither sane nor insane.

Justice Mason, in charging the jury in the same case, said: "* * * When you come down to the question of what is destined to be the *real point* in this case to establish insanity, and that is, *the delusion*, it is said to be upon the question of her relations to her daughter, etc." The editor of the *Journal of Insanity* in reviewing the case says further: "As the Court put it to the jury, on the main issue, it was wholly a question of delusion or no delusion in the legal sense, and that sense is well and authoritatively defined by Justice Mason."

Dr. Forbes Winslow, in his "Diseases of the Brain and Disorders of the Mind," says: "There are other affections of the nervous system that resemble in many of their features mental alienation. In such cases there is often great emotional exaltation, perversion of the instincts, confusion of thought, exaggeration closely bordering on aberration of ideas, as well as great eccentricities of conduct. Such symptoms may exist *independently of insanity*, as a distinct type of nervous disorder. It is only when the mind exhibits signs of positive alienation, *manifested by the presence of a delusion*, that we can satisfactorily affirm that insanity, *in the right acceptance of the term*, has clearly and unmistakably exhibited itself."

Dr. John E. Tyler, in a paper entitled, "Tests of Insanity," gives additional testimony on this point, and, although he does not employ the exact word, it is evident that he refers only to delusions. He says: "It has seemed to me that there is a peculiarity in the state and manner of action of the insane mind *which is always present and almost always so characteristic of insanity*, as to be worthy of notice, and able to give us often decided aid in coming to a just conclusion in doubtful cases of alleged disorder. We all know that with the insane, *self* becomes the central point of interest—the important consideration and the authority. * * * Upon any subject within the circle of his disease, facts and external circumstances have little or

no influence with him. His convictions come from his own personal laboratory. They are original. Sometimes they are strictly intellectual results; often they grow from a morbid emotion. But they are coined by him, and not received from another. And they are ultimate authority to him. *No sane man is ever half so sure of any most palpable truth as an insane person is of the infallibility of his own convictions.*" This belief in his own convictions, however, is not due simply to egotism, as Dr. Tyler infers, but to the existence of a delusion, which stamps its impress upon these convictions, and by virtue of which they occupy a position in consciousness denied to the convictions of sanity.

A case in point is that of Ann Barry, charged with infanticide, and in which Dr. John P. Gray, at that time Superintendent of the Utica, N. Y. State Hospital, testified as follows: "Have heard pretty much all the evidence given on this trial; have conversed with the defendant. From my examination of her I discovered no evidence of insanity. Insanity is a disease of the brain in which there is a change in the way of thinking and acting of the individual, *and that involves a delusion*, a supposition of facts that do not exist. Her confession of committing the infanticide does not show a delusion, and I do not think that she was insane at the time of committing the alleged crime."

In a Treatise on Mental Diseases, by W. Griesinger, the following occurs, the words in brackets being my own. "Profound modification in the sphere of the character and feelings, [moral degeneracy] morbid mental tendencies and emotions, [as in imbecility] general or partial diminution of the intellectual forces, [as in dementia] may exist in various diseased conditions of mind, either acute or chronic, without the presence of actual delusions. But experience teaches, nevertheless, that in a great majority of cases a different state of things exists; that insane ideas, properly so-called, make their appearance, and with the appearance of these insane ideas, which can no longer be resisted, constituting actual delusions, the mental disorder, which at first only reached the feelings, has now extended its influence and become insanity of the intellect." In other words the

presence of delusions is *prima facie* evidence of, as well as essential to, insanity of the intellect; the only condition in fact which merits the distinction of insanity.

Dr. Thomas S. Kirkbride, while president of the Association of Medical Superintendents of Institutions for Insane, made the following statement in his able discussion of Dr. Chipley's paper on the Legal Responsibility of Inebriates. He was considering the subject of moral insanity when he said: "In almost every case delusion can be detected. At the same time I am willing to acknowledge that there are cases in which, while I believe delusion exists, it is extremely difficult to detect, *but I have never seen a case which would be called insanity in which I did not believe real delusion existed.*"

A DELUSION IS NOT A BELIEF.

A delusion, however, is not simply a belief; nor is it merely a false belief. Any number of false beliefs may be entertained without producing a condition of insanity. In fact, many of the beliefs we now hold may be false. Are we not almost daily called upon to give up some long cherished belief? Do we not constantly find that the conclusions of yesterday must be modified and changed before they can satisfy the requirements of to-day? Are not all beliefs the product of imperfect knowledge?

Perfect knowledge leads to truth—not to a belief. No one *believes* that he is hungry or thirsty. He *knows* it. He knows it because his information is gleaned from sources so absolutely unquestionable as to leave no room for doubt. When an element of doubt exists, or the source of the information is such as to render its presence more or less probable, or even possible, we no longer *know*. Under *these* circumstances we can do no more than believe, and the volume and strength of our belief is in due proportion to the possibility of error. A belief, then, is always questionable, for so soon as our information becomes a positive truth, then belief blossoms into absolute knowledge. A delusion, whatever else it may be, is not a belief. Its possessor can conceive of no possibility of error in *its* composition. There

is no probability, nor even possibility of doubt regarding the primitive elements of which *it* is constructed. It is not simply an idea that can be fostered to-day and abandoned to-morrow, with little or no concern, but a living truth whose roots strike deep into the very soul. It is not a mere opinion, poising lightly in consciousness, clothed with but brief authority, but a perfect whirlwind of absolute conviction, that comes to reign and rule, and flings defiance at all beliefs and opinions; at the counsel of friends; at the customs of society; at the frown of judges and the threats of the law. Nay, verily, a delusion is not a belief. It is more than this.

To say that a delusion is a false belief is no better. All beliefs possess an element of falsity, else they would not be beliefs. We possess but few truths. Most of our mental property consists in beliefs and they are valued, accordingly, as such. If anyone doubts them, why, very well, it is a matter of no concern to us. We give them to the world, indifferent to their reception and careless as to their existence; but a delusion seems to be wrenched from the very Ego itself. It *must* be accepted by others. It is absolute, unqualified, unquestionable truth. It is so mysterious in its origin, so instantaneous in its conception and so overwhelmingly all-powerful in the manner of its conviction, that it appears to be stamped with the seal of positive accuracy, and to bear the very impress of the Almighty. It is unlike any other mental conception. It is not a belief, nor a creed, nor an opinion, nor a trust, nor a faith. Men hold these more or less lightly, but a delusion is burned into the very core and center of his being. It is a thing for which men will hate their friends; desert their families; defy the law; assassinate the one they love the best and die, if need be, in its defense. Can any mere belief, whether true or false, claim allegiance such as this? Can any belief so torture a man that he will strike, without other cause, at the source of his own existence? Can any mere belief so nerve the arm and steel the heart that a man can strangle his sleeping babe, the while he calmly smiles with the assurance of a duty nobly done? Can any possible

mental conception, except a delusion, transform a beggar into a king, seated upon his throne amidst the glitter and glamor of his royal court; or a king into a miserable ingrate, flying from the imaginary wrath to come; or into a snake, or a flying archangel, or a glass tube or into any and every other conceivable thing, whether above the earth, or on the earth or in the waters under the earth?

Beliefs are the result of knowledge; delusions have no such origin. A belief has its birth in the laws of association; is built up logically and consistently from the materials at hand; demands no defense at the hands of its originator and differs little from the beliefs of others. A delusion, on the contrary, is an idea born in subconscious cerebration; it is projected into consciousness during a period of mental stress; it is strenuously defended by the originator, and no one else believes it to be true. A delusion is even more than an idea; it is an idea that can be *felt*. A belief is the product of conscious effort, but a delusion comes unheralded and unannounced, bursting into the field of consciousness and filling the whole mental horizon with the glory and glow of its own significance. Ideas, which had hitherto been the guiding stars of a man's life, pale and fade in the radiance of this newly arisen sun. Motives, which heretofore had formed the very mainsprings of his existence, lose their force and meaning in the readjustment following this intellectual upheaval, and new and alien motives are introduced to fit the new conditions. The faiths and beliefs of a lifetime are forgotten or deserted. The whole mentality is filled with the personality of the new idea, and every faculty is made subservient to its despotism. The judgment, the emotions, the will, are all molded and shaped in conformity therewith. Is it a delusion of persecution? Then Fear arises in his resistless might and crushes out joy and gladness. Grim Terror stalks through all his thoughts, and Malice points her long and bony finger at the fancied author of his woes, and goads him to avenge the wrongs he has so long and so patiently suffered. Has he committed the unpardonable sin? Then the deadly miasma of Doubt is evolved. Grief

smites the rock of pride and a fountain of tears gushes forth. Suspicion withers with its baleful breath everything good and true, and all hope is swallowed up in misgiving and disbelief. Is it a delusion of grandeur? Then Joy is dominant and unconfined. Laughter greets the ear. Life is sweet. The glittering generalities of pomp and power are his, and every emotion and every act are in harmony with the delusion he entertains.

In insanity, every alien act and every alien emotion has its origin in a delusion. No matter what the man may have thought, and felt and done before. There is now a new order of things. Old things have passed away or have been temporarily dominated by the new. An alien idea has been crowned king, and every mental faculty has been sold into bondage. With an alien idea upon the throne there must come alien emotions and alien acts. At first we observe these alien acts, but are not sure they are not vicious in their nature. We go further. We observe the alien emotions, but are not sure that they are sincere, or that they are not the ebullitions of vacuity, or the accumulated froth on the surface of a weak mentality. We go still further. We probe the mental depths to find an alien king upon the throne, and from this alien triumvirate of act, and emotion and delusion, we form the mental attitude, and this we call insanity. But, if in our investigations we had found that the alien king had absconded or, indeed, had never gained a foothold, then no amount of alien acts, or alien emotions could have constituted real insanity. In other words, in the absence of a delusion, no amount of elation, or hilarity, or torrents of tears, or gnashing of teeth, or exacerbations of temper, or queerness, or peculiarities, or crankiness, or viciousness, or any other thing, would constitute insanity.

The mental life of the insane is not necessarily haphazard and without system or method. In the earlier stages at least it holds pretty consistently to the faith that is within and, however unreasonable it may seem to those who draw conclusions from a different premise, there is usually a pretty definite harmony existing between the de-

lusion and the emotions, and its outward expression in the form of concrete acts.

The fleeting fancies, so common in dementia, cannot be called delusions. They are but the fitful and grotesque gambolings of a mind freed from all restraint. They have neither the inherent power, nor the dynamic force, of a delusion. They come and go. The mind has again become a child, playfully sporting in the evergreen fields of imagination. They have no more significance than the same ideas in the minds of children, who play at keeping house, or riding in a coach and four, or holding a dignified and solemn consultation over the pain-racked body of a suffering doll. That they have been regarded as delusions in many instances is evident from the history records in hospitals for insane, but that they lack all the essential qualities of a delusion is a fact not difficult to recognize.

RELATION OF HALLUCINATIONS TO DELUSIONS.

Hallucinations are of no slight importance in the consideration of insanity, for, when present, they form one of the most distressing symptoms of this disorder; but hallucinations, in themselves, are harmless. It is only when they become crystallized in the form of a false conception, that they are found to be dangerous. Many sane people have hallucinations of sight or hearing, but they are able to detect the fallacy, and correct the erroneous impression. So long as they are recognized as hallucinations, and exist merely as vagaries of sight or hearing, no serious results ensue; but when they become sufficiently dominant to give rise to false ideas or beliefs, then untoward consequences may result. A man may hear unusual sounds, which he rightly ascribes to inflammatory processes in the middle ear. He may, indeed, hear sounds, which seem to be spoken words, but he knows this to be impossible in the absence of anyone to utter them. There comes a time, though, when the spoken words become more persistent and more significant; when the usual explanation of their origin is no longer satisfactory, and then the delusion is born.

A man who can listen to these voices with a feeling of unconcern, knowing that they have no basis in fact, is harmless and is not insane; but, if, when these words are again heard, something tells him, without any possibility of error, that they were spoken by his companion at his elbow, with the intention of insulting him, then he is not only dangerous but no longer sane. Hence, hallucinations as a symptom of insanity, have their basis also in a delusion. They cannot, indeed, be considered as evidences of insanity unless, by reason of their delusional implication, they lose their real significance and give rise to erroneous conclusions.

It is seldom, however, that hallucinations of themselves give rise to a delusion. On the contrary, they are almost always thrust into prominence by reason of the facility with which they fit into the dominant idea. The hallucinations of the sane differ very widely, in all probability, from the hallucinations of the insane. In one case, they arise merely from some defect in the organ of sense, or in the process of brain registration, with which anomaly the individual soon becomes familiar, and corrects with no greater difficulty than attends the correction of double vision. In the other case, the disorder may or may not arise from the defects in the organ of sense. Probably not. They are a part and parcel of the fabric of insanity itself. Hallucinatory threads, when present in insanity, are closely and intimately associated with the very warp and woof of the disease, and their ultimate ends are twisted and enmeshed in the roots of a fundamental delusion. They are born of a false conception, and rocked in the cradle of a false belief. Their origin, frequently, is in the very necessity of the situation. They become absolutely essential by virtue of an all-compelling emergency, and the sufferer sees the thing for which he so longingly looks, and hears the voice for which he so patiently listens.

A man, feeling a sense of unusual, sudden and mysterious power, believes that he has been divinely called to an important mission, the details of which are supplied by the fervidness of his imagination. He feels the thrill and

throb of conscious power pulsing in every vein. He is stirred to the deepest depths of his nature by the possibilities attending this divine connection. The outcome of the mission is to be so important and far reaching in its results, that it would be beyond accomplishment by any human means alone, but under *His* guidance and *His* direction, nothing can withstand the assault. He already feels the assurance of His aid and the benediction of His presence, and he listens intently for the voice of the Master. Every faculty is strained to catch the first glad word. All other sounds are lost, or forgotten. His ear is tuned alone to the accents of the Almighty. Why does He not speak? He is in an agony of despair. The situation grows desperate. Wrapped in oblivion to all earthly sounds he listens on. The strain begins to tell; the words *must* come. And just then, miraculously, it seems to him, there comes tinkling down through the immensity of space, "a still, small voice," and the delusion is rounded into activity.

Hallucinations, to be effective, must be grounded in a delusion. I can see no reason why the insane should not have the same harmless hallucinations, founded on some trick of the organs of sense, that the sane have, and which, having no foundation in a delusion, are corrected in the same manner. All the quips, quirks, and peculiarities of the insane are not necessarily evidences of insanity, any more than the same features are evidences of insanity in those unafflicted with mental disease. They are just what they are, no more, no less, and stand for the same value wherever found. The insane may have hallucinations, and all other peculiarities possessed by the sane, without their being implicated in their mental alienation in any manner. So long as these hallucinations are corrected by the patient, the attention of the observer is seldom called to them, and it is only when they become a part and parcel of the delusion itself, that they are thrust into prominence. Consequently, it is safe to conclude, that all uncorrected hallucinations have their roots in a delusion, whether the individual has been adjudged insane, or otherwise.

STABILITY OF DELUSIONS.

A delusion, when once installed, does not vanish in a day. It departs, if it goes at all, only with the removal of the cause which gave it birth. Its term of residence may be permanent, or temporary, but while it remains it is not subject to very great variability in the manner of its manifestations. If there is any change at all, it will be found in its volume rather than in the inherent quality of its original elements. It grows weaker by reason of the ravages of time, in common with other products of the mind, though the fact that it remains active and vigorous long after every other intelligent concept has fled, is striking evidence of the tenacity and endurance of the fundamental elements which underlie it. While it may vary slightly from time to time, it does not possess the variability of the "evanescent delusion" of the text-books. The basic principles of the delusion remain practically the same, the change occurring only in the form of its manifestations; and the fact that this variation in the form of its expression has been taken as a modification of the delusion itself, has been the cause of all the confusion regarding the stability of delusions. To illustrate. A transcript of the history of the delusion of one, M. F., a patient in the hospital, reads thus:

"January 6th. Has the delusion that she is to be kidnapped by masked men, who will inflict upon her the most inhuman torture, for the purpose of extorting a ransom from her friends.

"March 8th. Delusion has changed. She now believes that a conspiracy has been formed whereby armed men will appear on the ward, at a given signal, and murder her in her sleep.

"April 11th. Patient has still another delusion. She now believes that she is to be put out of the way by means of poison introduced into her food. As a result of this she insists upon buying her food outside and having it shipped in original packages, to be handled by no one but herself after its arrival."

Evidently here is a patient, who has had three separate and distinct delusions within a period of three months,

or, at least, so it would appear; but this is an error, and is the result of recording conclusions derived from merely a surface view of the situation. The truth is there, but it lies deeper. The fact is, the delusion has never faltered or varied in any particular since the date of its inception. The basic principle of her delusion was that she was to be subjected to great bodily torture and mutilation, which could end only in death, and this deep and abiding conviction was beyond all possibility of error, for reasons which she *felt*, rather than thought, and could not put into words. That she originally believed that the content of her delusion was to be accomplished by means of kidnapping her; that later the means to be employed took the form of a conspiracy to commit cold-blooded murder, and that still later the end was to be attained by introducing poison into her food, is no evidence of any change in the fundamental principle of the delusion, but a variation only in the means by which the end was to be accomplished.

The first solution of the problem was suggested by reading the newspaper accounts of the Cudahy kidnapping sensation. The delusion was doubtless already present, and she consequently read everything pertaining to the affair with avidity. The seed of suggestion fell upon fruitful soil. It was a proof print, a first impression, and so accurately did it fit into the delusion, that no later impression, no matter how stoutly maintained, has ever been able to completely efface it. After being brought to the hospital, the lessened possibility of being kidnapped obtruded forcibly on consciousness, and then through some form of suggestion, the delusion was expressed in the terms of cold-blooded murder. The same concrete facts, namely: the barred windows and locked doors, which would prevent kidnapping, would likewise prevent the entrance of armed men, and, after further consideration, or as the result of something she read, or remarks made by other patients, she finally adopted the poison theory, as offering the most reasonable solution (to her) of the problem. But the kidnapping idea had made such an ineffaceable and lasting impression, that even while she felt sure that she would be murdered

or poisoned, this original idea hovered always in the background.

The ideas, then, that she would be successfully kidnapped, murdered, and poisoned, were not delusions, but mere beliefs, and subject to all the change and mutability thereunto belonging. The unchanging and unquenchable idea that she was to suffer a violent death, was the delusion which filled her waking hours with dread, and haunted her when asleep. The various means by which she believed it was to be accomplished, and to which she gave expression from time to time, were *evidences* of a delusion, but not the thing itself. Indeed, I am forced to believe, that the majority of delusions recorded in histories of cases are not delusions at all, but merely the surface indications of a basic idea, which is one and unchangeable, while it exists at all, and which, like the parent lode, remains concealed from the superficial investigator.

THE BASIC PRINCIPLES OF DELUSIONS.

A conception of a delusion, formed exclusively from observations confined to the surface indications alone, is sure to lead to error. By recording, as veritable delusions, all the means and methods which the patient suggests as his theory of the manner in which the fundamental design is to be worked out, or has been accomplished, is to leave the impression that delusions are as numerous as the sands upon the seashore; whereas, I verily believe, that all the real, actual, fundamental delusions possible, can be counted on ten fingers, and then have fingers to spare. The same basic delusion may exist in the minds of a dozen men, and it may find expression in a dozen widely different beliefs, but these beliefs are not the delusion, by any means.

A careful analysis of 638 cases, where delusions existed, has been made and, although no two individuals gave expression to the faith that was in them in exactly the same terms, the number of real, fundamental delusions was very small. In other words, these 638 people had 638 beliefs, but they had very few delusions, the same delusion sufficing for many. For instance, one single delusion,

namely: the fear of injury, was entertained by 414, but the means and method by which this injury was to be effected, were as varied and numerous as the people themselves. There is no personal element in the delusion. It appears whenever, by reason of stress and storm, the mental soil is properly prepared in the presence of poisoned and impoverished blood. The fear of injury takes possession of the coward and the man of courage with equal facility, when it appears in the form of a delusion, though the channel through which the injury is to come, and the means adopted to prevent it, may differ widely in each individual. The delusion is thrust into consciousness without the recipient's cooperation, and without his consent; the means of its accomplishment, however, is determined by the personality of the man, and his general knowledge and environment, while the measures adopted for its prevention are voluntary, whether criminal or otherwise, and usually differ in no way from the methods that would have been adopted, had the danger been real instead of imaginary. Consequently, owing to the fact that no two men are alike; that no two men will possess the same general knowledge, or experience the same identical environment, and that no two will evolve the same beliefs from the same basic idea, it is plain to be seen that a very few delusions would be sufficient for all the uses of mankind.

An analysis of the 638 cases, mentioned above as having delusions, resulted in the following classification, which shows in a graphic manner how all these false beliefs are resolved into a *sense of power*, and a *sense of fear*, as the basic principles of all delusions, except that of altered identity, and this has its origin exclusively in illusions or hallucinations of sensation. In the great majority of cases the delusion of altered identity arises solely from illusions; that is, the idea of a change in identity is based upon some pain, or unusual sensation, or loss of sensation, in some portion of the body, which the patient misinterprets into a false belief, and this takes root in the form of a delusion. Where there is no pain or unusual sensation present, and the idea has no such basis, then it has its

foundation in an hallucination of sensation, rather than an illusion. In either event the delusion of altered identity differs very materially from the delusion of power, or the delusion of fear, both in its origin and in its process of development.

The delusion of altered identity develops slowly, and in most cases it rests upon a tangible, though misinterpreted foundation. The delusion of a sense of power, or a sense of fear has its primordial origin in an hereditary proclivity of temperament, which is encouraged by an environment favorable to its development, and is precipitated into activity by mental stress and strain associated with contaminated blood. The delusion of identity, on the other hand, is not a product of heredity, even in the remotest degree. It arises from a disposition to "want to account for things" and a tendency to do so, by reason of erroneous teaching, in a mystical or supernatural manner. It occurs, when it exists alone, in persons of little or no education who believe in ghosts and other preternatural manifestations; in conditions of mental enfeeblement where the capability of proper discrimination is lost, or in abeyance, and in hysteria and similar mental states. When it exists in conjunction with a delusion of power, or a delusion of fear, it is not so much a condition of altered identity as a supernatural explanation of the delusion already present, and this distinction is not only important, but can always be made. The delusion of altered identity exists alone in only a small per cent of cases.

The classification of delusions follows: Out of a Sense of Power spring three delusions, namely: Grandeur, Superiority and Sexual assurance; and out of a Sense of Fear, three more: Injury, Self-abasement and Sexual anxiety. From these there follows a host of beliefs, limited only by the capabilities of the imagination.

TABLES OF DELUSIONS.

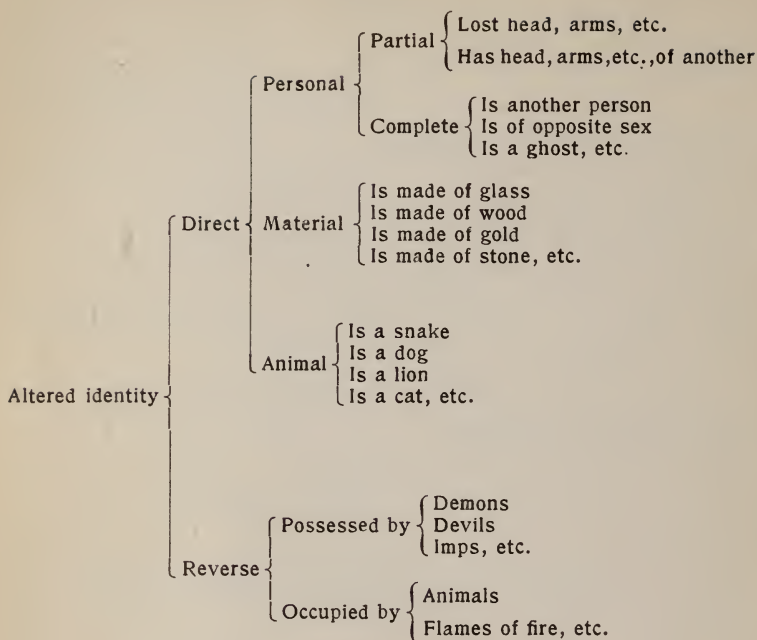
TABLE I.

Sense of power	Grandeur	Definite	Of person	Physical strength
				Mental strength
		Of property		Official importance
				Executive ability, etc.
	Indefinite	Of person		Personal possession
				Realty
		Of property		Exaltation
				Sense of well-being
Sense of power	Superiority	Spiritual		Sanctified
				Immortal
				To be offered as a sacrifice
				Divine mission to perform, etc.
	Social			Position
				Beauty
				Accomplishments, etc.
Sense of power	Sexual assurance			Offspring immortal
				Sexual relations only with God
				Dominion over opposite sex, etc.

TABLE II.

Sense of fear	Injury	Definite	To person	To body
				To soul
		To property		To reputation
				Destruction
	Indefinite	To person		Robbery
				Impending calamity
		To property		Future loss
	Self-abasement	Spiritual		Committed the unpardonable sin
				Neglected opportunities
		Social		Divine displeasure, etc.
				Disgraced
Sense of fear	Sexual anxiety			Defiled, etc.
				Infidelity
				Forcible intercourse
Sense of fear	Sexual anxiety			"Lost manhood," etc.

TABLE III.



These tables represent only 638 cases, but a close analysis of any number of so-called delusions will reveal the somewhat startling fact, that, with the exception of the one delusion, altered identity, all the others may be reduced to two fundamental principles, namely: An exaggerated sense of power, and an exaggerated sense of fear. But this discovery is not so startling after all, when we consider that this sense of *power*, and this sense of *fear*, are, in all the world, the two most potent forces. Every individual possesses a sense of power, which would lead to rapacity, robbery and violence, unless tempered and held in check by a sense of fear. Every individual is endowed with a sense of fear that would make skulking cowards of us all, unless upheld and strengthened by a sense of conscious power. A conscious power to do, and to dare, and to brook no restraint, is ever held in equilibrium by a conscious fear of the law, of the anathemas of society, of our own con-

science, and of the threatened hereafter. Between these two forces our course is held straight. Between these two forces civilization expands and grows. By virtue of a perfect balance of these two forces we know all that is best, and noblest, and sweetest in life. And by the domination of either of these to the exclusion of the other, we have that state of disorder and disarrangement of natural conditions, which belongs exclusively to insanity.

This, then, is the duality of our lives. To do, and to fear. And this is the singleness of insanity: To thrill with unlimited power, or shudder with absolute fear. Is it a matter of surprise that the mental operations of the insane follow a single channel, and no longer experience the elasticity and variation that comes from opposing forces, which check and support each other?

Hence we find that actual delusions are very scarce indeed, while the number of false beliefs to which they may give rise is limited only by the number of individuals. These 638 false beliefs were divided as follows:

Sense of power	{ Feelings of grandeur.....	72
	{ Feelings of superiority.....	52
	{ Sexual assurance.....	2
Sense of fear	{ Injury	414
	{ Self-abasement	44
	{ Sexual anxiety	46
Altered identity.....		8

This shows the remarkable preponderance of "fear of injury" as a delusion. Sixty-one per cent of the total of all false beliefs center around this one dominant idea. Included in these were all sorts of beliefs, as to the form in which this injury would come; by poison, by shooting, by electricity, by hypnotism, by devils in hell, and by conspiracies innumerable; while many were simply overwhelmed by an exaggerated feeling of impending calamity, but could give no definite expression to the means or methods by which this calamity would come, and could, consequently, make no preparations for defense, except to hide in out-of-the-way corners, bewailing their fate, or trembling with fearful appre-

hension. From the fear of injury, feelings of self-abasement, and sexual anxiety, arise 79 per cent of all false beliefs.

MANIAC-DEPRESSIVE INSANITY.

So far I have spoken only of those forms of insanity, in which the delusion remains unchanged and without variation in its basic principle, so long as it exists. I now wish to call attention to manic-depressive insanity, a condition in which the two fundamental delusional principles, namely; a sense of power, and a sense of fear, follow each other in more or less regular succession, like the ebbing and flowing of the tide. While, in some forms of insanity the delusion never varies from the time of its inception, the form now under consideration is characterized by a marked delusional interchange, at more or less regular periods. An exaggerated sense of power, is followed by a reactionary sense of equally exaggerated fear, and the patient is plunged from the heights of self-complacency into the depths of dark despair. In this delusional reaction, however, it is noticed that a perfect equation is maintained between these two forces. The higher the patient rises in the scale of power, the lower he falls in the scale of fear, when the reaction comes. At one time strong and defiant; at another, trembling with weakness and cringing with fear. If there is but slight exaggeration of the sense of power, then there follows but slight exaggeration of the sense of fear. So equally proportioned are these two forces, indeed, and so close and intimate are the relations they bear to each other in this reactionary cycle, that one cannot forbear wondering sometimes whether, after all, they may not have their origin in a common source, and that instead of being two separate delusions, are really but varieties of a single, ultimate, fundamental delusion.

This delusional reaction is not an anomaly, however. On the contrary it is the thing most to be expected. A delusion cannot possibly be entirely foreign to the general content of a man's psychic life. A man cannot possibly experience, in the form of a delusion, something he has never previously felt even in the remotest degree. The delusional

life differs from the normal in its intensity rather than in its primitive elements. Give a man's simple opinions the value of absolute convictions; give his ordinary beliefs the weight of unquestioned authority; give his normal sense of power and of fear free, unlimited and unrestricted range; in other words, exaggerate the natural mental processes to a sufficient degree; tincture them with the ethereal essence of a divine revelation; paint them with the never-fading colors of the eternal verities; fire them with the zeal of fanaticism; or chill them with the damp, unwholesome atmosphere of gloom and despair; convert the fundamental principles of normal mentality, in short, into delusions, and you have insanity.

The adequate and equal opposition of the sense of power and the sense of fear is the normal condition of the mind, and the one usually experienced by those most sane. Who has not felt the equanimity and sense of perfect poise, which comes from a well-sustained equilibrium of these opposing forces! And, on the other hand, who has not felt, at times, some slight shifting of the point of contact? Who has not some morning arisen from his bed with a sense of mental expansion; with a willingness, nay a desire, to grapple with all the problems of existence; with that ill-defined, but well-recognized, sense of well-being, in whose radiant light all obstacles fade and vanish as the mists retire before the morning sun? And who has not arisen from that self-same bed on another morning with an ill-defined feeling of impending calamity, with a sense of mental suffocation in the midst of vague but threatening difficulties; with courage sinking down, down, down, into depths apparently unfathomable, while the mind gropes in the midst of this increasing and oppressive gloom for the tangible basis on which this apprehension rests?

Are these not common experiences, in a mild degree of course, and varying in intensity with the temperament and personality of the individual? Do not all vital currents ebb and flow with more or less rhythmical precision? Are happy people always happy or serious people always sad, even in the presence of a continuous and unchanging environ-

ment? Does not night follow day? Is there not a never-ending procession of the seasons? Does not material existence demand the sunshine and the cloud; the storms of winter and the heat and effulgence of summer; the showers of April and the mantle of snow, before it can attain its perfection? Does not religion swing by a single thread between fanaticism and licentiousness? Does reform not succeed indifference, and indifference again follow the active period of reformation?

Action and reaction. This seems to be the perfecting process, and it is no less true of the mental, than of the material life. Why this is so we know not. Does the soil, whose surface has been flooded with the impregnating rays of a summer sun, still require the winter's storm to establish its fructification? Does the ship, that occasionally buffets the waves of a tempestuous sea, more clearly fulfill the requirements of its necessities than the one which sails the seas of eternal calm? This much we know. The psychical pendulum swings ever between varying degrees of hope and despair; between a sense of power, and a sense of fear.

Morbidity succeeds elation, just as night succeeds the day. The degree of intensity of each determines the mental status. The sanest of people have experienced, at times, and without a conscious cause, an exuberance of spirits, which must be forcibly suppressed in the interests of a proper sense of dignity and decorum; a welling up of hilarious impulses, which require a firm and steady mental grip to hold them in due subjection. At another time the same individuals will feel the temporary blight of an impending doom, which requires an active mental struggle to prevent their being entirely engulfed by the waves of morbid fear; a sense of impenetrable gloom, which threatens to overwhelm with an ill-defined dread of coming evil, and from which relief is obtained only by complete submergence in the daily affairs of life. These experiences, however, are temporary in their nature, and a way of escape remains open. Magnify, enlarge, expand, intensify these feelings; close all avenues of escape; shift the scene at more or less

regular intervals, and you have manic-depressive insanity.

The delusion, then, I consider to be the essence of insanity; and by delusion I do not mean a "queer idea" or a peculiar belief, which men may possess, and do possess, without any change in their mental lives, but an idea that is palpitating with life and throbbing with all the energy of a divine revelation; that takes hold of a man with the absorbing and all-compelling power of an irrefutable conviction, and that shapes and molds his mental life in conformity therewith. Without the advent of some such force, there could not occur that radical change in a man's method of thinking which insanity necessitates.

DO THE INSANE REASON?

The "change in thinking" of the insane consists, not so much in a warping of the reasoning faculties, as in the quality of the conclusions. The insane are not deprived of the power of reasoning. Reasoning means the *capability* of thinking; not the *quality* of the thought. In practically all cases of insanity, uncomplicated with idiocy, imbecility, or dementia, the power to reason is still intact. To say that a patient is "unreasonable" does not imply that he is unreasoning, or incapable of reasoning, but that his conclusions are at variance with those deduced by an average mind. When everything is taken into consideration however, the change in feelings and relations, by reason of a delusion which tinges the whole mental sky with its baleful light, and implicates every function of the mind in the furtherance of its design, I am not so sure that the conclusions reached by the insane, differ very materially from those which would be deduced by any other mind from similar materials. He has neither lost the power nor forgotten the art of reasoning; he is only measuring motives with another yardstick, and though many and woeful are the blunders he makes, still, can a man doubt his own mind?

Take 50 patients on a ward, who are suffering, not from mental enfeeblement, but from insanity. Ask any one of them his opinion of the mental condition of his companions, and he will tell you, confidentially, that, while *he* is all

right, everyone of the others is crazy. Ask another, and another, until all have been approached, and you will be surprised at the similarity of the replies. The contention of each that he is "all right" may be an indication of insanity, but the unanimous opinion regarding the others is very good evidence that they possess, not only the power of reasoning, but pretty fair judgment, as well, with reference to matters outside themselves. It is due to this very fact that the insane *do* reason, and not only reason themselves, but are able to detect the false note in the reasoning of their associates, that the hospitals are not forcibly emptied of every patient inside of 24 hours. It is only by reason of this fact that two or three attendants are able to control 40 or 50 patients. Did patients not recognize the insanity of each other, there would be concerted action for purposes of escape, and in such an event what could 100 attendants do with 1000 patients? Concerted action is one of the rarest things imaginable in a hospital for insane, and for no other reason than that the insane man does reason, and realize that, however unnecessary *his* incarceration may have been, the others are "where they belong."

Insanity, of course, adds nothing to a man's intelligence, nor does it increase his ability to reason. Sometimes, indeed, when the delusion is yet new, and the *ego* has scarcely adjusted itself to the changed conditions, much mental confusion arises, and the patient finds considerable difficulty in formulating his thoughts into definite expressions. But, while some of the insane reason well, and some very poorly, yet, upon close examination, it will be found that they reason very much as they did before becoming insane, so far as potency is concerned. This is especially true when the delusion has become fixed, and mentality has become perfectly adjusted to its new environment.

The change in thinking, then, in the insane, is not in the methods, but in the conclusions. On matters foreign to their delusions they give indisputable proof that their methods have not changed. They draw deductions, and arrive at conclusions, very much as other people do, outside the delusive area; and if on topics "foreign to their afflic-

tion" they employ an average degree of reason, is it asking too much to presume that they use the same degree when reasoning according to the light that is within them, however false the conclusions toward which they tend? Can we say that the insane do reason about some things, but have lost the power to reason regarding others? Is the power to reason a thing that comes and goes; active in the association of some ideas; paralyzed in the presence of others? Are false conclusions necessarily evidences of inability to reason? Can conclusions, whether false or true, be obtained without reasoning? False conclusions do not come so much from false reasoning, as from imperfect knowledge. If one man's conclusions differ materially from those of another, the discrepancy, in all probability, has its source in the premises adopted.

If, then, the insane *do* reason; if there is every reason to believe that the methods of reasoning are similar to those employed before insanity developed; if the conclusions are false, where hitherto, with the same methods of reasoning, they were true, is it presuming too much to say that the origin of the false conclusions must be located in the primitive materials with which reason deals? If this is true, then comes the final question, namely: If the conclusions are false, must the primitive materials be false? In other words, can the false conclusions of insanity exist *except as they have their basis in a delusion?*

CONCLUSIONS TO BE DRAWN.

Here, then, is the summing up of the whole matter. Whatever may be said for idiocy, imbecility, or the demen-tias, there can be no insanity except as it is the out-growth and result of delusions. The birth of the delusion is the starting point; the character of the delusion determines the local coloring of the mental attitude; the mental attitude determines the degree of implication of the emotions; the whole condition finding its outward expression in the actions of the individual.

In view, then, of what has been said, and of all that might be said by one more capable, I would suggest the

following definition of insanity, namely: *Insanity is a mental attitude, characterized by a radical departure from a man's usual method of thinking, feeling and acting, and due to a delusion which has its origin in some physical disorder.* In my mind a much shorter one would suffice, viz: Evidence of a delusion is always evidence of insanity, and neither can exist without the other. I have eliminated the word "prolonged" as qualifying the departure from the man's usual way of thinking, feeling and acting. If there *is* a departure in these essential particulars, based upon a false belief which has its origin in a delusion, it matters little how long, or how short the time of his alienation. That he *did* depart, and that this departure occurred by virtue of a delusion; these are vital points. The question of prolongation may be useful in establishing a prognosis in insanity, but not in establishing the fact of its existence.

The possession of a delusion, no matter in how mild a degree, or how temporary in point of time, provided it has sufficient vitality to give birth to a false belief that changes the character of man's thoughts, feelings and actions, is proof positive of insanity, even though the malady exist in such an attenuated form as to attract little or no attention. Ambulatory typhoid fever is no less typhoid fever because the man walks about, instead of going to bed and sending for a physician; and insanity is no less insanity because its victim manages to remain outside the hospital for insane, and refuses, or neglects medical aid. It is a difference only in degree, and just as ambulatory typhoid fever is more than usually dangerous, because of this very indifference to its presence and its results, so the delusion, which, by virtue of its mildness can be successfully concealed for a time, becomes a matter of increased peril, because of its tendency to become fixed and immovable, in the absence of timely and intelligent efforts made to correct it.

But how shall a man know, or how shall his friends, or his physician determine where danger lurks, or when, or how, it comes? When shall we say that a man is insane? Not, when does he become a "raving maniac," but when,

and where, will fall the first shadow of the approaching eclipse? Where will first be heard the rumblings of the coming storm? And, when it comes, how can we feel sure of its presence? Will the advancing cloud suffice; or must we wait for the lightning's flash and the thunder's roar; or, until the storm itself breaks in all its fury; or, indeed, until the earliest impetuosity is past, and, in the wreck and ruin left behind, we see such unmistakable evidences of disease as leave no room for further doubt? Something more definite than this is desired.

Dr. Julius Auerbach recognized some time ago that a more definite method of determining the presence of insanity was desired. In the transactions of the New York State Medical Society, 1863, he says: "That men without compass, without an established guide, relying solely upon their individual opinion or experience, must at times waver, is not only owing to the fact that they have to wrestle with an abstract science, but they wrestle without any of those aids by which the study and knowledge of abstract sciences are generally alleviated. That this deficiency exists, none will be able to deny, and the question is, how can this be remedied? He then offers seven suggestions as remedies, the second of which is: "*To establish undeniable and firm truths by which the physician may be enabled to ascertain the condition of the mind diseased, and which truths should be able to protect him from contradiction in courts of law.*"

A stake must be driven on that hitherto fanciful and fluctuating border line between sanity and insanity, and that stake is, *the development of a false belief, based on a delusion.* This done, the dividing line is fixed and immovable, and the establishment of insanity is no longer a matter of opinion, but consists in discovering the false belief, or in proving that it is present, but concealed. This may not be easy in all instances, but it at least possesses the merit of being definite. More than this, I believe the principles laid down, and from which these conclusions have been drawn, are based upon the actual facts in the case, however imperfectly they may have been enunciated, or

however much Reason may have stumbled in her unseemly haste, or swerved from a straight and logical course in her great anxiety to reach her journey's end. But one word of warning, and I have done.

A feeling of elation, or a sense of impending calamity, infrequent in its occurrence and evanescent in its character, and stopping short of the establishment of a false belief, does not in itself constitute insanity; but these are conditions which should never be encouraged, and which the individual should frown upon from their very inception. There is a species of pleasure in one, and a morbid satisfaction in the other, which tempts the possessor to cherish their presence and to favor their return. These are the constructive elements of the "day dreams" of youth, and give architectural outline to the "castles in Spain" erected by older, but equally pliant minds; and these are the self-same threads from which is woven that web of direful fancies, which fills our nights with terror and our days with baseless worry, suspicion and distrust. A feeling of undue elation; a sense of impending doom. These are the primal elements. Innocent in themselves, perhaps, but their indulgence is the source of the greatest danger, and their frequent recurrence an occasion for grave alarm, for "this way madness lies."

OUTLINES OF PSYCHIATRY IN CLINICAL LECTURES.*

BY DR. C. WERNICKE,

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A Case of Acute Autopsychosis on Hysterical Basis, Description of Autopsychical Perplexity—Examples of Alternating Consciousness, the “Second State” of French Authors—Periodical Inebriates, Cure of One by Bromide Treatment—Acquired Moral Insanity, a Special form of Autopsychosis—Example of such a Case of Recurrent Course.

LECTURE TWENTY-EIGHT.

THE examples of acute mental disease, I have until now presented, may be regarded as relatively pure and simple cases of acute somatopsychosis and acute allopsychosis, for their cardinal elementary symptoms consisted, in the group of diseases first described, of those disorders of secondary identification which referred to the conception of the body, in the second to those of the conception of the world. These identification disorders exclusively affect the sensory province, the relation of S to A of our scheme, if in particular the subordination of the symptoms in the domain of anaesthesia, paraesthesia and hyperaesthesia is often questionable and left to option. We now come to the question, if we follow the ideas of the psychical mechanism previously evolved: are there analagous disor-

*Continued from *Alienist and Neurologist*, Vol. xxv. No. 1.

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ders of the secondary identification in the third domain of consciousness differentiated by us, that of the personality, or in other words, can our scheme, traced from the assumption of centripetal conduction paths, but extending over the nearest sensory projection field into associated projection fields, but still representing a physiological continuity, be transferred to the relations of more complicated associative complexes? It is at once seen, that an answer can be given exclusively from the experiences of the Clinic, in that our whole scheme can claim no other value than that of a convenient aid for the objective representation of the symptoms, so extremely difficult in our province. You will now have gathered from the introductory remarks at the beginning of our demonstrations, that it of necessity follows, equally as with a somatopsychical disorientation and perplexity—we had also become acquainted with motor disorientation and perplexity—to recognize an allopsychical disorientation and perplexity as effect of acute psychosis.* There are also in fact analogous identification disorders, as in the domain of the body and world, in the autopsychical province, and thus is shown the propriety of instituting a special group among the acute psychoses, that of the acute autopsychoses.

That the possibility of gaining some idea of space from the paths considered, ceases in the province of the personality, I have repeatedly shown. But that of course will not prevent us from recognizing, that in the complex general concept of the personality, the sum of all memories, as I have previously defined it, to prominently set forth the contrast to the two other domains of consciousness as the sum of all memory pictures—sub-divisions are possible and actually exist, which are empirically established, and, therefore, demand recognition. The character, the groups of different interests wholly independent of each other, like those of family, business, etc., are examples. But we will further have to accept, that a narrower complex must be contained in the sum of all memories, which to every person seems the personality strictly, and is sensed as a unit. A disorder-

*See Allenist and Neurologist, Vol. XXIII.

der of identification of this complex may occur without the memory having suffered demonstrable damage in the sense formerly defined by me, and it must then be determined, whether the distinctions of hyperaesthesia, paraesthesia and anaesthesia employed for sense impressions are proper here. I would be glad to wholly abstain from attempting such distinctions. The expressions: psychical anaesthesia, psychical hyperaesthesia, etc., met with in many authors,* have naturally a very different meaning, but in my opinion are improperly chosen, owing to their subjective color. In the following I perceive one of the most instructive examples of a wholly acute, almost apoplectiform autopsychosis, in which the affect of autopsychical perplexity, as well as the confusion in autopsychical orientation, were to be very clearly observed. In part I make use of the actual words in written and verbal reports of the well educated and unusually expressive patient.

Miss V. F., now 50 years old, was under my care for many years, and is now to be called recovered, except for certain subjective complaints. Until her illness she had only slight hysterical symptoms, especially pressure in the head, spells of crying for no cause, the feeling of great lassitude. In the unusually hot summer of 1886, she was detained in the city for two months by pressing duties in a benevolent society, and suffered greatly from the heat. In July she was able to go to a friend's family in the country, where she improved the first two weeks, slept well and the headache disappeared. One evening, after she had worked in the garden, she felt depressed, was sensitive—everything annoyed her. The next day she was still more fretful and felt so nervous that she must often choke back the tears. "A thunder storm threatened." That night she suddenly awoke after a vivid dream with a feeling of anxiety and such severe palpitation that she "must press her hands to her heart to prevent it jumping out." She felt dizzy, had the sensation that her mind left her and as if her head had been covered with felt. She tried to open the

*I mean Griesinger and Eminghaus especially.

window or door to get into the open air, but found both locked and so must be satisfied with cold compresses to her head. "Thus she felt like a prisoner and for hours paced back and forth in the small room; first tried to find the letters of her friends, then got the mirror *to convince herself of her own identity.*" The next morning the patient felt very ill, she then remained almost entirely sleepless and for hours suffered with intense anxiety. The thought, she would lose her mind, did not leave her the next day, and rendered her oblivious to everything, it was too close for her anywhere, she must get in the open air if possible. To be alone made her apprehensive and the journey home in a railway car frightened her terribly; she felt as if she must jump out. The night after her return home she slept better again. Then a condition developed, on the whole stable, which continued for a year with slight variations in intensity, which I will try to describe in the patient's own words.

For this purpose I quote a few notes made at my request in the summer of the year of the beginning of her illness.

"According to my sad experience the affair is such that I am constantly under the ban of mental inability to comprehend my own reality, mental and physical. The efforts to attain this cause me constant torment, and I must repeatedly give up finding the key to the mental manifestation enigmatical to me. *I am not conscious of myself, must ever repeat who I am, what my name is.* I try to become self-conscious introspectively, in vain, as well as by inspection of my external person, this is perfectly strange and unknown to me; this condition causes fearful torments. It is the same with regard to the past. I know well all that has happened to me, what I have experienced, but it is as if another, a stranger to me, might have experienced it. My speech is usually entirely strange to me, it is as though another person spoke from me, yet this symptom first appeared toward the end of the winter. The old familiar, confidential relations with family and friends seem incomprehensible and long past; the dearest, best known persons often seem strange and peculiar. For a time I thought my-

self identical with my sister Olga. Strangers, new people are not so disagreeable to me and may take me out of myself for a time.

"By consideration of my limbs I have always hoped to regain my consciousness, yet this effort always ended in the feeling of having seen something familiar, without being able to become conscious of the unity of my body and mind. In walking, especially in winter, I have often wandered about in a state of total unconsciousness. Then again I am as if transformed into an entirely strange being. Terrible were the days which occurred every week in the winter, when I was so nervous that I did not dare move, not even turn over in bed, because the degree of consciousness necessary caused me torments. It went so far, that I must always sit reclining, because I could not have the back free without the question arising whether it belonged to me. I am extremely sensitive and irritable, often intolerable and unbearable in spite of all self-control. Probably I want to get to the bottom of something unfathomable, for I always feel as though I was composed of many persons, of whom none is the right one. It is best when I live wholly mechanically or can suppress as much as possible the search for myself. The worst days are those when restlessness and anxiety are added to this search." The patient further describes violent headache, first as pressure in the middle of the head, then as throbbing in the temples, also spinal pains. These always induce the feeling of tension. It often seems as though the head was pressed together or all drawn up."

After a few years this state felt by the patient to be unbearable, gradually improved, and in 1890 she felt almost well. Following the climacteric a relapse occurred in 1894, but which was not so violent as the first attack, and has not as yet after three years wholly disappeared. However, the general condition is little affected by it, the patient looks fresh and remarkably young.

To leave no doubt as to the significance of this case I have to make the following remarks: If the patient's self-control towards the physician was always so well retained,

that she seemed always capable of associating with others, still her feeling of misery was often increased to an almost unbearable degree and inconsiderate outbreaks of despair towards her relatives. For years the most pronounced weariness of life existed, and still the fear of suicide was not imminent, because she was restrained by her religious principles in which she also found a certain consolation. Not only from her own impulse, but because her condition demanded it, for years the patient excluded herself entirely from all society, and only through the great devotion and personal attachment particularly of an older sister, who shared her seclusion was it possible for the patient's medical treatment to be carried on outside of an insane hospital. All this shows that the patient's pathological condition was to be regarded a real mental disease and in no way a borderland case belonging more to the neuroses, in spite of well retained formal power of thought.

From our standpoint the case is very clear, for it is a typical example of autopsychical perplexity and disorientation. The combination of somatopsychical perplexity and disorientation will not mislead us in this conception, but on the contrary strengthen it. The numerous sensations, of which the patient complains, belong here in part, the balance have the significance of independent attendant hysterical symptoms.

With respect to the etiology of the case, its disposition in the protean picture of hysterical psychoses is not objected to. The close relationship of the symptom complex with other mental diseases unquestionably hysterical, of which I will soon speak, might be decisive. Only this much as to our case, that the course of the disease was continuous and, in consideration of longer periods, plainly descending. The intercurrent variations in intensity were very keenly felt subjectively and frequent, but of little account in objective estimation. An alternation of symptoms, such as would be characteristic of hysteria, was never mentioned. Besides real hysterical stigmata, like fainting, disorders of sensation, ovarian tenderness, etc., were absent.

In literature, and not only in the psychiatric, but also

in polite, you will meet with cases which have a certain close relationship with that just described, I mean the conditions of double or alternating consciousness, often improperly called 'dazed conditions' by psychiatrists. But the latter name should be reserved solely for those acute psychoses, which bear the mark of a stupefaction of the sensorium, then a real clouding of consciousness to a noticeable degree. In the cases previously described it is out of the question, the sensorium is apparently well retained, while it is a matter in a certain measure of an interruption of continuity in the consciousness of the personality, the kind that two entirely different personalities mutually replace each other, one appears in place of the other. Hence, memory of the pathologically changed personality, i. e. its experiences, actions and thoughts may be entirely lost—an autopsychical memory defect exists for that time—or only a summary, confused memory or limited to individual actions and experiences of this time, exists. What is of interest here, is not the memory defect, but the mental condition at the time to which the lapse of memory relates, which owing to its noticeable deviation from the content of consciousness of the personality in the normal state has been termed "second state," the *second etat* of French authors. These alternating conditions, but always the same in each phase, of which one belongs to the norm, the other to the pathological condition, may follow each other in frequent rotation, and the memory then always goes back exclusively to the similar phases, so that the consciousness of the personality seems divided into two, in rare cases more groupings independent of each other, which owe their co-existence in a brain to accident alone in a certain measure. The independence of one personality from the other is not limited to the choice of certain memories, but to the domain of interests, inclinations and disinclinations, peculiarities of character, etc. A previously faultless character may in the second state represent the state of mind of a brutal criminal*. These extremely enigmatical conditions cannot be questioned

*See Diss. Inaug. of Wolfgang Bohn; Ein Fall von doppeltem Bewusstsein, Breslau, 1898.

as to their reality, their theoretical interest I will not deny. But they seem to be in part art-effects of hypnotic suggestion—and are furthermore so rare. I have e. g. never seen such a case—that they cannot be tarried with in the pressing demands of the Clinic. It is sufficient to have mentioned them.

Whereas somewhat more frequently sporadic attacks of such a *second etat* are observed, and, it seems, exclusively on hysterical, epileptic or alcoholic degenerative basis. At our Clinic in the course of a year no less than four of these cases have been admitted. Only one perhaps belongs to the category of dazed conditions. On the night of June 11th, 1896, a merchant of 23 was admitted in a stupefied condition, who complained of anxiety, expressed delusions of allopsychical relativity, and ideas of allopsychical anxiety, was poorly orientated and believed he was persecuted. It was learned that on May 31st he had had an absence lasting half a minute, accompanied by a peculiar motor derangement; on June 1st had left the home of his parents and did not return. A sore on the left edge of the tongue might indicate a recent convulsive seizure. On June 14th perfectly quiet and beginning disease in sight, but almost complete lapse of memory for the time from June 1st to the 12th, except completely isolated fragments of memories. At the end of July the patient could be discharged recovered. Patient did not drink, no hereditary predisposition to epilepsy, had never had an epileptic seizure before. Up to the time of his admission he had not been considered ill. At this time he had avoided his own home, spent two days with a girl with whom he was intimate. A number of the most complex actions and those giving the impression of reflection occurred at this time, and a mental disease evident to the laity could only have appeared shortly before admission. It seems to mark the transition of the pathological second state into the normal personality. Complete restitution of the lapse of memory did not occur.* A

*The same patient was readmitted January 3rd, 1898, after attempting suicide on the street. Lapse of memory for three days, a spot on the tongue probably from a bite. Well in the interval.

second case is that of a Jewish merchant of 26, from Alsace. He was admitted September 19th, 1896, in a slightly confused, greatly exhausted condition, claiming to be Felix Faure, the President of France, and three weeks ago to have started on a bicycle tour from Paris to Lille, Luxemburg, Basel, Constance, Ragaz, Innsbruck, Vienna, Warsaw, Breslau. Complete disease in sight on the day following after a good sleep. Patient was discharged recovered on October 14th. He states of his trip, that he had traveled "half asleep," here and there used the railroad. His memory of it had wholly vanished. Nevertheless, it must be admitted for the extremely deaf person with poor sight also had made this tour without injury, that he has performed a number of complicated actions apparently in conscious state, and first presented evident signs of mental disease in consequence of excessive exertions. According to his statement he came of a strongly tainted family, had often indulged in absinthe to excess and six years ago had to spend ten days at St. Anne owing to an alcoholic excess. The delusion of being President of France, and being ordered to Warsaw by the Czar had first occurred to him in Vienna. Good memory up to the time of leaving Paris. A merchant of 44, who for years had attacks of dipsomania, was admitted September 1st, 1896, and on admission presented traces of acute alcoholism in the way of slight motor restlessness, a slight tremor, insomnia, complaints of restlessness and head pressure. His memory only extended up to August 18th, the time he left Wolgast to take another position in Breslau. Absolute amnesia for the interval. On the ward he was apathetic, indifferent, no desire to be occupied, with subjectively impeded ideation for complicated thought, but the ability to attend, the attention, the judgment of his fellow patients were approximately normal. The fourth case was a servant girl of 19, whose father was epileptic, 12 years ago had sporadic epileptic seizures and had given up her position before the occurrence of a series of epileptic attacks and wandered about for hours. Remembrance of the beginning of this pre-epileptic dazed condition, nothing of all that followed.

Naef* describes a very remarkable and instructive case from Forel's observations. He was an educated man of 32 with strong hereditary taint, and always extremely nervous, who for some months had an official position in Australia, traveled on an official mission to a city in the interior and there became acutely ill, probably with an attack of dengue fever. To return to his usual place of abode he took the railroad, but on arriving there after traveling 36 hours, he no longer knew of his intention, believed he was at a strange place, was seen by a lady who knew him without his recognizing her, went to a second seaport, which he must have known from his journey there, did not recognize it again and went back to Europe, when he remained in Zurich to no purpose for several weeks, and from a newspaper item respecting the strange disappearance of this officer from the Australian city, led to the presumption this notice might refer to him. When he came under Forel's care he had an almost total memory defect for a period of about eight months, which embraced not only the experiences in Australia and the journey to and fro, but also the time of obtaining this position and the preparation for it. After several months' treatment, which was prefaced by a hysterical seizure, he was able to supply the gaps in his memory in an extremely sensible way by the aid of hypnotic suggestion. It was shown that the dazed condition so-called dated from the febrile attack, that the memory defect for the time prior is to be regarded as retroactive amnesia so-called. What here interests us more is chiefly the description of the second state present at the time of observation, if in its decline. A thorough examination in many directions, which have not been taken into account, would have been very desirable, still much of value may be perceived. It may at most have been a matter of real stupefaction in the patient at first after setting out on his return, later during the whole complicated journey and during his stay in Zurich the patient must have made an approximately normal impression. On ship

* Ein Fall von temporärer totaler theilweiser retrograder Amnesia. Dess. Inaug. Zurich, 1898.

board the patient must have given a false name, perhaps a greater part of his personality had disappeared. The memory of the events of the journey, which under Forel's treatment were found to be reproduceable, was very summary, for it was limited to a loose combination of the most striking occurrences, without the patient being conscious of a motive for his actions, except a vague impulse to reach home. On ship board the patient spent his time in walking and reading, e. g. he read Dicken's novels. The patient led a similar, but more vegetative life in Zurich where he remained several weeks without thinking that he was near his relatives and his home. The newspaper item awoke the effect of autopsychical perplexity, which caused him to seek medical aid. According to the patient's description, his ability to attend must be greatly reduced in this second state, the attention was not especially tested. The amnesia for the time of the second state is comprehensible as a consequence of the lessened ability to attend and is so interpreted by Forel. Still to be mentioned is occasionally disturbed sleep, various hypochondriacal sensations, and a nervous twitching of the eyelids in the patient greatly reduced in nutrition.

You see that the cases of the so-called second state may vary greatly. Their duration at one time is only a few hours, again several months. They are usually accompanied by an epileptic, hysterical, hystero-epileptic or katatonic attack, or a real dazed condition, either of hysterical or alcoholic origin. Only persons with strong taint, so-called degenerates, are subject to this disease. A memory defect remains, which is either total or permits only summary remembrance, and to which many times a still further defect, in the way of retroactive amnesia, is added. The recovery, as in all mental diseases, characterized by disease insight, clearing up of the memory defect, as important as it may be practically, is without significance. If we attempt a better clinical definition, it is a matter of the sudden occurrence of a changed content of consciousness in the domain of the personality, then doubtless an acute autopsychosis. The interruption of continuity in the con-

sciousness of the personality, the total autopsychical disorientation, by which the possibility of a new personality differing from the former is afforded, carries with it that the affect of autopsychical perplexity, which was so characteristic of the patient first described, is here completely absent or only occasionally appears during restitution. A defect state is based on this loss of continuity; but it manifests itself outwardly by a sort of leveling of the ideas, a deterioration in the supraquantivalent ideas constituting the normal personality, a changed, and as readily comprehensible, inferior character results. The incentive to action seems to be always merely the present situation and the simplest egotistic motives.* The fuller knowledge of the symptomatology is unfortunately very imperfect, and thus it is that the most of these patients appearing well to the laity at the time of their illness, do not come under competent observation. At any rate the existing disease should be strictly separated from the real dazed conditions, which are readily recognized by the stupefaction and more or less pronounced allopsychical disorientation. The dazed conditions present even more than the symptoms complex described, they may, as I will admit, often represent an exaggeration of them, for their etiology is largely the same. I presume that a relatively good attention and poor ability to attend might be met with in all pertinent cases, perhaps also a concentric contraction of the visual fields. Corresponding to the psychical narrowing of the personality to largely egotistic ideas a slight exaltation usually appears, an unusually happy conception of the situation, if a tendency to brutality does not exist. Temporary ideas of grandeur may accordingly appear. Hence, the undeniable relationship to the type of mania, in which you will become acquainted with an entirely different disease.

The cases of reasoning mania, which in part actually belong here, are a sort of mania, which is only disclosed by the so-called maniacal actions of the patient. On more frequent recurrence of these states, periodical mania is spoken of, a doubly erroneous term, for neither a periodi-

*Compare the dissertation from my Clinic above cited.

city nor a real mania exists. In these so-called periodical manias, according to the statements of French authors, it is frequent that the same content of ideas always recurs in the attacks, and thus the same mode of action results, often agreeing in detail. I remember a case of the sort in a clerk, who said he was a physician, repeated apparently clever frauds and always in the same way, so that the police finally recognized the perpetrator by the sort of crime. The case was later explained by the fact that the patient succumbed to epileptic dementia. Owing to the importance of these cases forensically, it is unfortunate that the clinical knowledge of the so-called second state is still so deficient; for it is evident that forensic cases are not suitable material from which to derive the symptomatology of a definite mental disease. The simulation of a memory defect is easy for criminals of every sort, and the most readily carried out.

The conditions in the case of the so-called periodical inebriates are similarly complicated; still I do not hesitate to include here the great majority of these cases. The present customary disposal of under periodical mania quite generally prevailing in psychiatric literature is entirely unsuitable for these for the reasons cited above. A real periodicity is demonstrable only in the fewest cases, and if the expression periodical inebriate, derived from popular parlance, will be used, it is to be considered, that by external conditions the occasion to drink alcohol and to seek congenial company recurs periodically for certain classes of society. In many cases the first glass of the alcoholic beverage affords the cause of an excess. The periodicity may be most often met with in those cases in which a feeling of anxiety leads to the use of alcohol, still the frequency of these cases is overestimated.

The patient from the Clinic above mentioned,* questioned as to this point, gave the following explanation: "I cannot say that I have ever had the feeling of being compelled then or at any time to drink a glass of beer or whiskey, such a feeling does not occur in me for months.

*See page 206.

But it is established that in a state excited by alcohol I long for more. At different times I have gone into company which I would never have sought if my normal processes of thought had not been inhibited by the use of alcohol. I have never been able to understand the beginning and termination of these situations, and later when the incidents have been told me by friends, with whom I had acted a childish part, it has seemed incomprehensible, that I, as a reasonable and sane person, had gotten into such situations, and their explanation later has been wholly impossible." This man describes himself as nervous, egoistic and irritable, has palpitation of the heart at times and was easily affected by business annoyances. He had once remained away from business for fourteen days and still had the best of testimonials from his employer. Still unquestionable is the information I obtained from an eminent judicial official of his condition of this nature. This gentleman, 47 years old, had had 15 years ago a sporadic status epilepticus lasting several hours. For five to six years he has had at times states of excitement, attended by restlessness and feeling of anxiety about the heart, when he remained away from home for two to three days, wandered about the most diverse saloons, made a spectacle of himself, was quarrelsome and created a scandal, without being fastidious as to his company. Of these times, which the patient considers pathological, he has only a very summary memory. They recurred at very irregular intervals. As the patient was evidently overworked and poorly nourished, I recommended a vacation on the Rivera with the result that he has been free from his attacks for a year. From this time for six months frequent excesses, sometimes states of nocturnal anxiety in the intervals. Consequently systematic bromide treatment in large doses, decreased later. In the early part of this treatment little sugillations on the tongue could be repeatedly demonstrated, which pointed to past, but very mild, therefore overlooked, nocturnal attacks. The good result of this treatment (two years ago) confirms the assumption, that the conditions described have originated on an epileptic basis.

The states of pathological intoxication previously mentioned, do not belong here, but to the real dazed conditions, like the majority of the very transient preepileptic and post-epileptic psychoses.

You observe that the cases belonging to our group of diseases have not been embraced previously under a centralized point of view. A greater contrast can scarcely be considered, than that between dazed conditions and real mania; nevertheless you find cases in literature, which evidently belong to our group of diseases, first allied to one, then to the other of these contrary concepts. If you should be astonished by such evidence of the confusion of concepts prevailing in our literature, I must unfortunately remark, that the case is not the only one, but that we meet the same manifestation, in want of better definitions, in nearly all domains of our discipline; hence the impossibility I have always regretted of recommending to you one of the well known text-books on psychiatry for your private study. This digression is not superfluous, it shows us rather the necessity of looking for a name suitable to our disease type. According to my opinion it should follow the concept of the second state, heretofore always too restricted, which is ambiguous in itself. I am unable to find a better, equally significant and shorter name. That in our sense is a matter of an acute disorientating autopsychosis including a defect state, on specific degenerate basis, I have already shown.

It may be proper here to anticipate an objection which you could easily interpose. Is the sudden appearance of such a defect, such a totally changed personality possible, without the memory of the normal state, at least of recent events, somewhat as in Neaf's case, being completely obliterated? The retroactive amnesia would then have to be demonstrated in every case as a necessary preliminary for the occurrence of our disease type, which we would include in it. But in the case of the bicyclist cited above this symptom is wanting, and we can only say: as hard as it is to understand that a personality so changed can only exist in moderate recollection of the normal, the fact is incontestable.

ble. The periodical inebriates are evidence. Such a patient may have heretofore been the best father, in the changed condition he unhesitatingly leaves his family in want and still fully knows in what condition he has left them. His thoughtlessness depends on the conclusion from analogy, that they take life as easily as he for the moment, in an emergency that God will help. A very graphic description of this changed conception in an inebriate is found in *Raskolnikow* by Dostojewski. The court official mentioned above had so little memory defect for recent events, that he generally observed court days and controlled himself quite well during their duration. An explanation of this remarkable contrast between the pathological and recollected normal personality cannot really be found in the assumption of a toxic effect, which is obvious in the inebriate. At such times a division of the personality may be spoken of, an instance which finds an analogy in the condition of the decay of the personality formerly described by me, and an explanation in the assumption of the sejunction process.

It might surprise you, if at this moment I reminded you of a case of so-called acquired moral insanity and include it here. You know that it is a matter of cases of disease, whose recognition jurists have particularly contested, unfortunately supported by the strife in opinions which has sprung up, not only in our own camp as to the actual existence of these pathological states as well as to their theoretical conception. It must be admitted unfortunately that the tendency to fit the cases into a definite scheme has led several specialists to ignore certain facts and to advance the proposition a defect state in the moral sphere must be combined with one in the intellectual, to be considered pathological. But this claim does not hold good in view of the fact, it can only spring from the misunderstanding that the attributes of the chronic and especially the cases of congenital moral dementia so-called have been transferred to those of a more or less acute origin. Whereas the latter may quite often lack every trace of intellectual derangement. We will understand them if we considered the elementary symptom of leveling of the ideas, above referred

to,* as their foundation. In fact almost all other elementary symptoms may be wanting, except an inner restlessness and irritability peculiar to most cases. It is this leveling of the ideas, which gives these cases a certain similarity to mania, for we will see later that it constitutes a cardinal symptom of the latter disease; all other equally important symptoms belonging to this disease type, like flight of ideas, loquacity, the pathological euphoria, etc., are wanting here. If you remember that the normal supraquantivalence of certain ideas forms the basis of character and morality, that likes and dislikes have the same origin, that therein is to be sought the sole inhibition of egoistic impulses predominating in primitive persons, you will understand that the cessation of the supraquantivalence induces a change in the personality, which is most plainly manifested in the sphere of morality, like and dislikes for certain persons, the inconsiderate gratification of egotistic impulses. Explanatory ideas as sequence of the resistance opposed to the changed moral condition by the relatives or society may take second place in form of ideas of persecution.

A detailed description of this condition would lead us too far. I will only briefly touch upon the etiological factor. In this respect a connection with processes of evolution and involution in the organism is wholly unmistakable. If we decide to call these cases *moral autopsychosis*, we can differentiate a hebephrenic, climacteric and senile form of the moral autopsychosis. A menstrual form lasting only a few days may also be recognized. Further, I do not doubt that other etiological factors of hereditary and degenerative sort are concerned, and that exceptionally other pernicious agencies, which may lead to the outbreak of acute psychosis, as e. g. head trauma, may have the same effect. That it is a matter of real psychoses, not of continued moral perversities, or in other words of the manifestations of pathological action of the brain, is proven for a part of these cases by their curability. Still, the climacteric form seems to be largely of an unfavorable course, the senile ex-

*See page 210.

ceptionally so, the latter finally terminating in senile dementia. Kahlbaum's disease type of heboids or hebephrenia, characterized by purely empirical criteria, seems to me that part of these cases belong here. The relative curability of this disease has been set forth by Kahlbaum.

With respect to its course it should vary according to the etiology. I have seen a very acute onset e. g. in a girl of 15, below the mental average and of an inebriate father. The further course after a certain duration of the disease crisis (seven weeks) was descending to summary disease insight during the next month. In three years relapses occurred three times, but of somewhat less intensity and shorter duration, yet of the same course. In the intervals indications of melancholic moods occurred, so that for a time a circular psychosis might be thought of. But this idea must soon be given up, if the definition of the circular psychoses as a regular alternation between maniacal and melancholic states would be adhered to. On the one hand a melancholic phase could not be spoken of, but it was a matter chiefly of very transient paroxysmal attacks of melancholic depression, which perhaps might be regarded as actually due to disease insight, on the other hand the pathological condition, if occasionally combined with excitement, was surely not maniacal. The moral defect, the lack of pliability, respect for the attendants and physicians, also for older patients, chiefly the lack of discipline, the marked wilfulness, the absence of any feeling of proven friendship, the want of the sense of shame and propriety, the tendency to filthy and obscene language and corresponding conduct, even to gross uncleanness, prevailed rather. A true loquacity, flight of ideas and restlessness were never present. In fact the patient's condition was regarded as a presumable congenital defect, which could have increased about puberty as a moral degeneration, and even brought about detention in a correctional institution. The mother's statement that she had been a good natured and well behaved girl until the onset of her disease, could not be given much credence, owing to the woman's apparent limitation. Her conduct betraying absolutely no trace of shame,

at the genecological examination, rendered necessary by her gross slovenness, was characteristic. The complete change which later occurred in the patient's conduct, as she became a modest and reserved girl, and industrious and helpful on the ward, showed us the error in our conception. With respect to the girl's intellectual development, her judgment and school acquirements at the age of 18 corresponded to those of a girl of 14 of the same social standing, while she was not backward in her physical development and menstruated regularly during the whole period of observation.

If we retrospectively consider the cases of disease assigned to the province of the acute autopsychoses, we can bring them under a common point of view, in so far as they are all characterized as manifestations of defect in the autopsychical sphere. The mental state presented by Miss V. F., just described, shows us the defect in secondary identification, the autopsychical disorientation and the attending effect of autopsychical perplexity. Then we had become acquainted with states of interruption in the continuity of the personality, the so-called second state of French authors, likewise a defect state, but which is not felt to be in opposition to the normal condition, and therefore, is without the effect of autopsychical perplexity. The common severe neurotic degenerative etiology forms a connecting link between these two conditions otherwise so different. Further we become acquainted with cases of periodical inebriety so-called, in which, as in the second state, the spontaneous occurrence of a changed, always inferior personality in consequence of internal pathological processes was to be assumed. I stated that these cases had generally been assigned to periodical mania. Finally we found that acquired moral insanity represented a wholly analogous defect state in the autopsychical sphere, that it was proper to institute an acute moral autopsychosis and thus to embrace in it a part of the cases so-called periodical mania, as well as the so-called reasoning. For this last category of cases the physical changes which accompany the advent and loss of sexual maturity, as well as senile

involution, are of decisive influence. At the next presentation of patients we will take up certain manifestations of irritation in the autopsychical sphere in contrast to these defect states.

(To be continued.)

MIXOSCOPIC ADOLESCENT SURVIVALS IN ART, LITERATURE AND PSEUDO-ETHICS.*

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ROUSSEAU'S pseudocynical gird at science in his Discourse is born of that bourgeois primitive necessity for belief in the absolute—to which gradual evolution is peculiarly repugnant. Thereby the bourgeois readily becomes a prey to the quack in literature, science and art because the quack combines the occult and the sterile platitude. Rousseau, Grahame remarks, sees only the mean origin of philosophy. He does not see with Shakespere

That there is some soul of goodness in all things evil,
Would men observingly distill it out,

nor with Shelley that

Thought by thought is piled
Till some great truth is loosened and the nations echo round,

nor with Emerson that

Evil is good in the making.

The "Discourse" consists essentially of the cant of the golden-age mythologist who having exhausted all sensations by explosive indulgences, cries, like Solomon, from the exhaustion of satiety that all is vanity. Swift's "Voyage to Laputa," and Samuel Butler's "Elephant in the Moon"

* Continued from the February (1904) *Alienist and Neurologist*.

played previously the same note decrying science that moved Rousseau in the "Discourse."

Swift's peculiar relations to Stella (Miss Temple) and Vanessa indicates, according to Wilde,* that, like Ruskin, Swift, "was constitutionally incapable of any passion stronger than friendship." Swift's mixoscopia while akin to that of the era of Charles II., displayed that phase of primitive mentality which finds in pure obscenity wit and humor. This type of mentality is a frequent source of mixoscopia, especially of the "religious" "business" type to whom religion is merely a fetich or mascot. The prudently prudish medical man who contemns physiopsychologic discussions of sex problems but is given to post-prandial flashes of gross obscenity is of this type.

Something like passion appears in Swift's relations to Miss Vanhomrigh (Vanessa), but his relations to Stella resembled those Ruskin attempted to establish with his wife, later married to Millais. Ruskin suffered from a congenital sexual defect which under canon not to speak of common law invalidated marriage. In the papal court of the Rota such marriages were frequently declared null and void, as the medico-legal work of Zaccheus shows.

Ruskin was thirty years old; an art critic justly esteemed when he met Miss Euphemia Gray, the daughter of a provincial clergyman. Ruskin, as one of his biographers euphemistically observes, was not a man to love a woman because she was a woman but his æsthetic sense, in which his sexual appetite probably found entire expression, as it does in much lower types of mind, was satisfied by Miss Gray's beautiful face and form. Art and music often afford outlets for the appetite in sexual defectives. Soon after Ruskin's marriage the Millais pictures began to attract attention and their vogue was aided by Ruskin's judicial praise. Millais was commissioned to paint Mrs. Ruskin's portrait. Millais was a normal red-blooded man; Mrs. Ruskin a passionate, well-developed woman whose marriage life with Ruskin had been platonic. The sexual impulse was awakened in Mrs. Ruskin, who evidently had

* Closing Years of Swift's Life.

not realized its strength or significance before Millais found himself in love with Mrs. Ruskin. Mrs. Ruskin's devotion to Ruskin ere Millais came into their life was picturesque. In her, psychophysiologic states evidently occurred in which, as Havelock Ellis points out, the sexual impulse in women differs from that of men. It shows greater apparent passivity. It is less apt to appear most complex spontaneously, more often needing to be aroused. It tends to become stronger after sexual relationships are established. The threshold of excess is less easily reached than in men. The sexual sphere is larger and more diffused. There is a more marked tendency to periodicity in the spontaneous manifestations of sexual desire. Largely as a result of these characteristics, the sexual impulse shows a greater range of variation in men than in women, both as between woman and woman and in the same woman at different periods.

One day, hand in hand, humbly and honorably, there walked into Ruskin's library his friend and his wife. They knelt before him, and in a brave yet broken voice John Millais told of the love that had grown in his heart for the woman who knelt beside him; and then she told her story, while the husband listened, amazed, but quiet. When they had finished the sad confession the dreamer closed his book and bade the imploring couple arise.

Then he gave them to each other, relinquishing all claim upon the woman who bore his name, blessing them because they had been honest with him.

Steps were taken at once, with Ruskin's aid, to remove any obstacle to the immediate marriage of his wife and Millais. Divorce in due season was granted. The next day—in 1855—John Millais led the woman of his choice to the altar—her former husband giving her away and standing by as the principal witness.

The strange ceremony ended, Millais took his wife home, and, seemingly inspired all the more by her presence, began to paint pictures which raised him to still greater prominence, and which were still praised, when praise was due, by John Ruskin.

Ruskin is hardly a fair illustration of D'Israeli's epigram: "The critics are those who have failed in literature and art," yet his work shows judicial lack of appreciation of science similar to that of Butler, Swift, Rousseau and Carlyle. The recently retired English physiologist, Burdon-Sanderson, had a controversy with Ruskin which illustrates this defect. Burdon-Sanderson* was in 1882 appointed to the Waynflete Professorship of Physiology at Oxford, being the first occupant of the chair which had then been newly founded. There was then little or no provision for the practical teaching of physiology at Oxford and a proposal to expend \$50,000 in the erection of a lecture room, a laboratory and working rooms, for the purpose, met with determined opposition on the part of a number of members of Convocation, a large proportion of whom were country parsons and "Dons," the *ne plus ultra* type of "learned" fools. Burdon-Sanderson was known as a vivisector, and antivivisectionist sentiment was roused to fury. E. A. Freeman, the historian, denounced the proposal with all the truculence of the overbearing pedant which he displayed in his criticisms of Froude and of everyone who differed from him about anything. The nonsense he talked may be gathered from the following "arguments" of his speech. He would not allow any class of men a monopoly in science. As a historian he claimed to be as much a man of science as anyone who operated on live rabbits, but he did not ask to be allowed to illustrate the siege of Jerusalem by a repetition of its massacres, or the Elizabethan festivities at Kenilworth by a bull baiting. He deprecated the establishment in Oxford of a "chamber of horrors." After a tough fight the antivivisectionists were outvoted. But they would not accept defeat, and attempted to turn the flank of the enemy by inducing Convocation not to vote the annual grant required for the lighting, warming and general upkeep of the laboratory. This, too, failed. The controversy led to Ruskin's resignation of the Slade Professorship of Art. To Ruskin vivisection meant cruelty to animals, complete misunderstanding of science and defiance of the moral law.

* *Medical News*, January 23, 1904.

Freeman denounced vaccination with equal zoophilic virulence and died a victim of smallpox. Zoophilism of this type is usually associated with extreme misanthropy. The gentleness toward crickets of the "wicked" Lord Byron was, as elsewhere shown,* associated with brutality to humanity in general and his own relatives in particular. This arises from the suspiciousness of primitive man. It was noticeably present in the suspicious world-betterers who so marred the French Revolution. Couthon, the paraplegic, one of the most merciless of the Committee of Public Safety, was much devoted to spaniels. Chaumet exceeded female sentimentality in his tenderness to his birds. The murderous Fournier carried on his shoulders a pretty little squirrel, attached by a silver chain. Panis was intensely devoted to pheasants. Marat reared doves. Sergeant was devoted to spaniels. A lady coming to implore, but in vain, the life of a relative, trod accidentally on the paw of a spaniel, whereupon Sergeant exclaimed: "Madam, have you no humanity?"

This same suspicious sentimentality is found in criminals. Whatever refinement or tenderness of feelings criminals attain to, remarks Havelock Ellis,† reveals itself in what we should call sentimentality or sentiment. Thus cynicism allies itself with sentiment in their literary productions. Dr. Lindon records two interesting instances of criminal sentiment. A German criminal having murdered his sweetheart most cruelly went back to her house to let out a canary which might suffer from want of food. Another after having killed a woman stayed behind to feed her child, which was crying. Lacenaire on the same day he committed a murder risked his own life to save that of a cat. Eugene Aram was very indulgent to animals. Wainewright was always very fond of cats; in his last days "his sole companion was a cat, for which he evinced an extraordinary affection."

One phase of mixoscopia in women to whom, without being inverts, coitus with man is repugnant, is bestiality. This finds outward expression in excessive tenderness to-

* *Alienist and Neurologist*, 1898.

† *The Criminal*, p. 181.

ward animals amounting very often to a fanatic zoophily. The animal here usually performs cunnilinguis.*

To the alienist who knows how frequently zoophilism is associated with the psychical degeneracies, with perversions and with suspicious mental states such as occur in sexual defectives, such antics must seem ominous, especially as Ruskin claimed a freedom from cant. Ruskin, however, was born a British philistine, and revolted from philistinism with the acridity of the convert who carries the intolerance of his old faith intensified into the new. In his philistinish denunciations of philistinism, especially of the United States, he too frequently exhibits that sentiment common to criminals and parvenues which, to borrow Tom Paine's fine remark, pities the plumage but forgets the dying bird.

Freeman, Carlyle, Ruskin and their ecclesiastic allies simply adopted, despite its disproof by time, Rousseau's view of the sciences: "Useless as are their objects, the sciences are still more dangerous in their results. They are born of indolence, and in their turn they encourage it. They cause an irreparable waste of time. . . . These vain and useless declaimers on every side, armed with noxious paradoxes, sap the foundations of faith and annihilate virtue."

It was through cant like this that thought in Spain nearly perished by the Inquisition, which for the same reason tortured Galileo, burnt Giordano Bruno and put Dante on the Index Expurgatorius.

Anthropology, especially in its folklore phase, has demolished the "golden-age myth," demonstrating that all defects of civilization are survivals of primitive states, which circumstances bring into prominence. Rousseau's remedy for all evils was the primitive one of Buddhism and dogmatic Christianity: submission. Unlike Malthus and Emerson, he could not see that:

The fiend that man harries
Is love of the best
Yawns the pit of the Dragon
Lit by rays from the blest.

* Witthaus-Becker: *Medical Jurisprudence*, Vol. II.

As the "Discourse" gave that sweet solace to the ill-doer and pharisee: "I am no worse than the rest," it met with widespread favor. A mass of pinch-beck glittering generalities, everyone applied it to his neighbor. As it attacked science, always unpopular with plutocratic occultism like "Christian Science," or bourgeois iatrophobia like Dowieism, it led M. de Franceuil, receiver-general of finance, to offer a salaried place to Rousseau, who broke down in severe neurasthenia from worry over its fancied responsibilities.

The influence of adolescent stress rather than masturbation or other auto-erotism in the production of mixoscopia is evident on an analysis of Rousseau's Confessions. Excess in masturbation remarks Havelock Ellis,* has often occurred in men and women whose work in literature and art cannot be described as premature and false. K. P. Moritz in early adult life masturbated excessively and up to 30 had no relations with women. Rousseau despite Mme. de Warens'† experience "learned that dangerous supplement which deceives nature. This vice which bashfulness and timidity find so convenient has, moreover, a great attraction for lively imaginations, for it enables them to do what they will, so to speak, with the whole fair sex, and to enjoy at pleasure the beauties who attract them without having obtained their consent." This condition, which Hammond‡ has found to occur pathologically as a form of mental impotence without manipulation made such an impression on Rousseau that he incorporates it in Emile.§ This book was the outcome of a reaction against the educational system dominant at the time it appeared. When Rousseau wrote there was little home training by parents except among the bourgeoisie. Education was in the hands of the tutor in families, or committed to priests at colleges. In France, about 1762, when "Emile" appeared were many people taking no interest in education. The philosophers had proven too much against priests for society to trust

*Psychology of Sex Auto-Erotism, p. 190.

†Confessions.

‡Impotence.

§Emile.

them implicitly. The Jesuits, then the great educationalists of Europe, were growing in disfavor. As fathers did not trouble themselves much about the matter, women like Mme. d'Epinay or Mme. de Graffigny formed plans for education which were amusingly puerile in their sonorous maxims and their utter ignorance of childhood and manhood. Rousseau lifted up his voice against the pedantic follies of existing modes of training; but, unlike Locke, who, in his "Thoughts on Education," had previously sought to form a "young" gentleman with the *noblesse oblige* "maxim," Rousseau's purpose was to form a selfish "man." In Emile occurs the following letter: "My Dear Emile:—If the fire of an ardent temperament becomes irrepressible, do not hesitate for a moment, do not allow the end of nature to be evaded; if I must be subject to a tyrant I prefer the one from whom I may escape the more easily of the two. Whatever may happen I can escape from a woman easier than from myself."

Gogol,* the great Russian novelist, masturbated to such excess that the dreamy melancholy thus induced was claimed to be his success as a novelist. Goethe† one time masturbated to excess. "That at the present day eminence in art and literature may be combined with the excessive practice of masturbation is a fact of which Havlock Ellis has unquestionable evidence. How far masturbation in moderately healthy persons living without normal sexual relationships, may be considered normal, is a difficult question, only to be decided with reference to individual cases. As a rule it may be laid down that when masturbation is only practiced at rare intervals and *faute de mieux* in order to obtain relief for physical oppression and mental obsession it may be regarded as the natural result of unnatural circumstances, but that when as often happens in mental degeneracy and as in shy and imaginative persons perhaps of slightly neurotic temperament may also sometimes become the case, it is practiced in preference to sexual relationship, it at once becomes abnormal and may possibly lead to a variety of harmful results mental, and physical."

*Havelock Ellis, Op. Cit.

†Wahrheit und Dichtung.

This latter opinion is borne out by E. C. Spitzka* who finds that in masturbation cases while there is a remarkable dullness of the normal emotions there is often an affectation of a high moral tone aggressively urged, a tendency to denounce normal sexual indulgence and to suspect the sexual purity of others.

*Journal of Mental Science, 1888, p. 219.

(To be continued.)

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

THE PLEA OF MYSOPHOBIA AND OTHER MORBID FEARS; is likely to be made the groundwork of an action to break the will of Francis Renbell Bryan, a rich American philanthropist, who died in Paris, in November, 1892, leaving \$10,000 to a historical society, and the residue of his fortune to the South Kensington Museum, in London. This will has been attacked by relatives on the plea of the testator's insanity. The case is being tried in the Seine courts.

Evidence was given that Bryan never wore socks, for fear they were impregnated with poison, and soaked his new suits of clothing in water for forty-eight hours before wearing them. He belonged to the jockey club, but never passed along the boulevard overlooked by the club windows, fearing his fellow members. The demarcation be-

tween morbid fears, folie du doute and mania of suspicion requires exceeding expert psychiatric analysis.

A NEUROLOGIST FOR THE RUSSIAN TSAR.—If the statement made in *Everybody's Magazine* is true, the Tzar of all the Russias, needs the advice and treatment of a good neurologist like Kovalevsky. "Physical weakness," "shattered nerves," a feeble, dependent will and an amiable, yielding complaisancy of judgment to the suggestions of women in time of war, are signs too markedly neurasthenic for sustaining wars directing strain and action. Under these circumstances the audacious little brownies of Japan may escape a fatal hug from the Bear, and prove themselves little giants in the fray for a while, but not in the end. The final fate of Napoleon awaits them. Russia is invincible on her own soil in a long fight.

THE PSYCHIC SEQUENCE OF NON-PUBLIC RESTRAINT OF CHILDREN is shockingly apparent in many ways in our cities. The loud, howling newsboy, making nights and public street cars in day time noisy almost beyond endurance, is always in evidence.

The vicious ways of the unrestrained child of the slums develop the law-defying, law-violating man. A short time ago four negro boys asked a white boy for a nickel, the boy refusing to give it, they pounced on him and fatally beat and stabbed him. Here is the beginning of the psychic evolution of the highwayman and the assassin.

Public indifference and police indolence and unconcern concerning this subject are the causes, incipient and developing, of much mature lawlessness.

Curb the vicious kids in public, and the full grown kidnapers, killers and criminals of other kinds will be fewer. Adult criminality is a psychological sequence of unchecked crime in childhood and youth, and our police and people should be on the alert to check the criminal child in public.

THE SCHOOL OF MATRIMONY proposed in Iowa is the beginning of recognition of the fact that the sanitary breed-

ing and rearing of human beings is worthy of at least as much consideration as the propagating and raising of hogs and cattle.

If the right sort of medical intelligence is placed at the head of such a school, and cupid's victims can be kept from losing their heads, some good to the race might come of this legislative scheme.

The breeding in and in of fools and idiots, of inherently endowed and environment created neuropaths and psychopaths, and the organically diseased and defective in other ways, has gone on so long in the world, that such a salutary and vital sanitary reform at the foundations of life may be difficult to bring about, but after a time those who contemplate conjugal life unions may be moved to stop and consider before taking the vow that binds for life for better or worse, and so often worse than better, for the organic and mental integrity of the human race.

DEATH OF DR. JOHN B. MURPHY.—Dr. John B. Murphy, Superintendent of the Asylum for Insane at Brockville, died suddenly from heart disease at his home, January 17th, aged 54. He graduated in medicine at Queen's College, Kingston, in 1876, and practiced for a time in Belleville. He was appointed Superintendent of the Asylum for Insane at Mimico in 1891, and was transferred to Brockville in 1894.—*Canadian Practitioner*.

DR. HUGHES' BOOK AND HIS FRIENDS.—The editor takes this occasion to cordially thank the reviewers for their generous expressions of appreciation of his first book on the Neurological Practice of Medicine, and hopes the second edition now in press, and the second volume in continuation of the same subject may be equally fortunate in meeting with so gratifying a reception.

If the life of the editor is spared long enough it is his purpose to go on with the work till the entire field of neurological medicine, including psychological medicine, shall have been traversed as he sees it, in the light of the present and remote and recently past contributions of the subject.

Such a book, two or three decades ago, would not have met with so general approbation.

But in the radium light of new discovery, clinicians are coming to a better appreciation of the relations of neurology to general medical thought and practice, and to a better understanding of the dicta of the great Cullen, "*Quantam ego quidem video motus morborum fere omnes a motibus in systemate nervorum ita pendent, ut morbi fere omnes quodammo Nervosi dici queant.*"

"HOW TO LIVE" is the best health journal that comes to this office. Dr. Geo. F. Butler is a thoroughly posted medical man, who skims the cream of medical experience in matters hygienic and serves it to his readers in mentally palatable and digestible form.

He is besides, the genial and accomplished Alma Pater of one of our best Northern sanitariums.

INSANITY AMONG NEGROES.—Dr. W. F. Drewry, of the Central State Hospital at Petersburg, Va., in his report for 1903 states that from best available information insanity and tuberculosis were comparatively unknown among negroes before the war. In 1860 only 25 insane negroes were in the State Asylum at Williamsburg. Ten years later 123 negroes were reported in the state. Today there are 1,074. In 1860 the ratio of insane negroes to the negro population was 1 to 7,000; in 1900 it was 1 to 640. From 1890 to 1900 the number of first admissions reached 1,512, being a yearly average of 150. From October 1, 1900, to October 1, 1903, 745 cases, or an average of 248 a year, were received. The reason given for this increase is, in general, race degeneration. During the days of slavery it is maintained the negroes were under strict discipline, lived in clean surroundings, were subject to greater moral control, led systematic, regular lives, and in general were surrounded with conditions which conduced to both physical and mental health. Since emancipation Dr. Drewry asserts that various dissipations, vices, bad habits, irregular living, indolence, privation, etc., have lead to a weakening of the

negro constitution, and therefore to a natural development of disease, such as insanity and consumption.

Before the war insane negroes who were tractable and quiet were still retained on the plantations and farms and kept at work, if able, and well cared for by their masters and the plantation physician, so that a smaller proportion were found in hospitals for the insane, the necessity for changed environment and hospital treatment of quiet cases not being then so well understood as now. Besides the inhibitions over impulses to alcoholic indulgences and other excesses and vices were regulated by overseers and their masters, thus diminishing the causal influences of insanity among the blacks. But since the negro has been his own master the bad among them have grown worse. Unrestrained evil inclinations have hastened the mental degeneracy of many who might, under more restricted liberty have escaped the calamity of neurotic decadence. The regular enforced labor and normal sleep and diet and reasonably regulated amusements of the southern negro undoubtedly conserved his energies, his vitality and his sanity in a great many whose descendants, have under unregulated personal liberty, become neuropathically decadent, idiotic and insane, just as inadequate regulation of conduct in the neuropathically endowed of any color permits the development of morbid neurotic conditions involving them which might be kept in advance and in process of extinction.

The youth of the country are harmed in this regard by too little regulation during their developmental periods. The street arabs and gamins evolve under the prevalent restraint into workhouse, poorhouse, imbecile homes and insane asylum inmates, in too many instances.

POLITICS AND PUBLIC HEALTH.—It is with much regret that we note in the *Wisconsin Medical Journal* of February last, the retirement of Dr. U. O. B. Wingate from the position of Secretary of the State Board of Health of Wisconsin. Dr. Wingate had been recognized for several years as a thorough sanitarian and acknowledged authority upon the subjects relating to public health. The *Wisconsin*

Medical Journal alludes to the matter as follows: "Dr. Wingate's retirement is not in the interest of the people nor of the public health, nor is it due to any lack of fitness; political reasons only have dictated it. In the language of one of the political members of the State Board of Health, 'this plum should be passed around.'

"We know whereof we speak, when we say that the method of this retirement is discreditable to those members of the State Board of Health who manipulated the deal, discreditable to the State administration and unwarranted by Dr. Wingate's long and efficient conduct of the office. The public health is too vital a matter to be subjected to the vicissitudes of politics."

Instances of successful or of unsuccessful interference by politicians with the work of boards of health are unfortunately of too common occurrence in this country. Political bossism, Addicksism and the selfish greed of office-seeking too often result in the removal of competent officials at the period of their greatest usefulness. It is not necessary to turn backward many pages in the history of public sanitation to witness the practical abolition of the National Board of Health by the withdrawal of its appropriation in 1883; the ill-assorted union of health, lunacy and charity in Massachusetts in 1879, under the panicky fear of Butlerism; the recent overthrow of the health administration of Pittsburg; the unsuccessful attempt to depose a public sanitary official in Michigan. These were all illustrations of such unwise and harmful interference. "If," says the *Wisconsin Medical Journal*, "the politicians of this state were to grasp the force of these facts, and were to consult the best interests of the people, we should not again be treated to the 'spectacle of the underhanded removal of a thoroughly competent medical official at the period of his greatest usefulness and for the stupid reason that the 'plum should be passed around.'"—*Boston Medical Journal*.

We feel it our duty to pass this poison plum around in order that the dear, innocent, confiding politically-buncoed public may see where the disinterested friends of the people, the machine politicians, are leading this country that our

fathers founded of the people and for the people. Our rights are being stolen, and people are being wronged in every state and city by practical politicians who are not in politics for their health or the health of the people, but for "what there is in it" for political pulls pockets. Eternal vigilance is the price of public health as well as of liberty in this country.

THE ACQUITTAL OF GENERAL LEONARD WOOD by the senate committee, on charges involving his conduct as Governor-General of Cuba, should close a chapter of personal history, which, had consideration of fair and honorable dealing ruled, would never have been opened. The unprejudiced public has had the conviction from the beginning that the assault upon General Wood's character and reputation was prompted by motives of jealousy, spite, and revenge, and the evidence produced before the senate committee, so far as disclosed, has confirmed that conviction. It is not denied by General Wood's best friends that his administration in Cuba was marked by some errors of judgment, but not a particle of proof has been adduced to show that acts were committed reflecting upon General Wood's personal character. The attempts made to blacken his name, when analyzed before the committee, resulted in nothing but a mass of insinuations and contradictory stories such as are usually trumped up against men in positions of influence and authority. On the other hand, the record stands that General Wood's administration of affairs at Santiago and afterward at Havanna redounded to his lasting credit and that of the government which he represented. The position General Wood held in Cuba was unique, and carried with it many difficult and arduous duties, all of which he performed with scrupulous fidelity and conspicuous wisdom. This has been the general verdict on his administration from the beginning, and such will remain the verdict of history and to the medical profession.

PROGRESS IN UNDERSTANDING OF ALCOHOLICS.—
It is a pleasure to note the various journals which are now

regularly published giving prominence to the medical discussion of the drink problem. Among the oldest is the *Medical Temperance Review*, which is the organ of the British Medical Temperance Association and has been published seven years under the editorship of Dr. Ridge. *The Temperance Record* is a very attractive monthly in which the scientific side of the subject is made very prominent. In France there are three journals in this field, the oldest of which is *La Temperance*, the organ of the National Society against the abuse of alcohol. The second journal is *L'Alcohol*. This takes up the question of anti-alcoholic studies, following medical lines and giving a general discussion of reform movements. The third journal, *Les Annales Antialcooliques*, edited by Dr. LeGrand. This is more of a medical journal than the other two, and contains a great many striking papers on this subject. Another paper has some prominence and is called *L'Abstinence*, and is published in Lausanne, Switzerland. This is an excellent paper giving summaries of studies in that country.

To this list should be added the *American Journal of Inebriety*, an able periodical from which we quote, and many well conducted journals in Russia and elsewhere, all alive to the perils of alcohol as a beverage and as a destructive and often fatal ingredient in patent medicines, popular cordials and so-called tonics and cure alls used by the deluded and mistaken people. There is more food for thought in the present day aspect of the alcohol question, than in the substance itself for body sustenance.

AN INTERESTING DISCUSSION ON EPILEPSY characterized the December first meeting of the New York Neurological Society, arising out of an interesting but too pessimistic paper read by Dr. M. Allan Starr, (Dr. Starr's papers are always interesting) in which he maintained that this disease is always organic and incurable. In a certain sense epilepsy is always organic, though we often fail to find the foundation lesion by present methods of examination. And it is certainly curable in many, though not thus far in the majority of recorded cases, while it must be conceded from all clin-

ical experience that epilepsy as Starr and Fisher maintained in the discussion is one of the most incurable of diseases. Our experience coincides with that of Clark, Dana and others. Epilepsia is not so hopeless as it has been regarded.

Epilepsy may be likened to diabetes mellitus, which may be caused by a puncture of the floor of the fourth ventricle, a cerebral hemorrhage or the pressure of a tumor there, or the poisonous influence of curare, or alcohol, or by a brain or upper cord lesion, or a climacteric diabetes, or by gastro-enteric cause. Like diabetes it may have causes in the brain or some other in organ like the liver or heart, or concussion of the brain may cause it, or heart or brain traumatism. States of pregnancy or traumatism of the nervous system may produce it, and it is often associated with hysteria, as in hysterio-epilepsy. It may be reflected from the genital centers also, as in excessive venery. And gout or syphilis may cause it, as they cause diabetes, and other diseases may develop it as typhoid, scarletina, small pox, etc.

As Mosler supposed diabetes insipidus or polyuria to be caused by excess of inosite in the blood and Zimmer supposed diabetes mellitus to result from deficient glycogenic function in the muscles, it may be due, as is now plainly maintained by many, to autotoxicity, especially may this cause, plus an inherent neurone morbid aptitude, account for the paroxysms of idiopathic epilepsy.

OLD NEWS ABOUT THE HYPNOTIC POWER OF ELECTRICITY.—A late number of *Harper's Weekly* says: "There have recently been published records of some experiments carried on by M. S. Leduc, with the object of using the electric current to produce sleep and of studying its effects on the brain generally. In early experiments it was shown that the brain is the best conductor of electricity in the human body, being about 3,000 times more conducting than muscle. It was also observed that when a continuous current was passed through the head from one ear to the other, that the sensation of giddiness was produced and that objects appeared to revolve in the same direction as the

current flowed. However, when the electrodes are placed on the forehead and neck, and the current sent from back to front, the effects are innocuous so long as a mild current is used, and in some cases may be beneficial. According to M. Leduc, the most satisfactory current is one of 4 milliamperes at 30 volts if broken or interrupted 100 times a second for 8-10 of the period of the interruption. The first effect noted was the disappearance of the faculty of speech, after which followed the loss of the motor faculties. Under ordinary conditions there is no affection of the respiration or pulse unless the current is increased, and then it may cease. The patient is said to awaken instantaneously from the electric sleep and to experience a feeling of refreshment."

We have been practicing fronto-occipital and nuchal constant current electrization for more than a quarter of a century for the cure of insomnia and for brain tranquilization.

Our first paper on the subject of cephalic electrization appeared nearly that long ago in the ALIENIST AND NEUROLOGIST. This news is old. Every electro-neurologist now knows about it. The constant labile sponge electrode current is the best with longer interruptions.

ALUM.—The people asked for alum bread because it was within the reach of the poor. A boodle legislature called it poison and gave them a senatorial Stone instead. And this, in the name of the People's friend, Democracy! And because of this iniquity an indignant medical journal transcribes Lincoln Steffen's *McClure's Magazine* denunciation and exposure of the sin. Others will follow. The medical profession stands for honesty and purity in dealing with the people and in its wrath despising iniquity. It is nearer to the people's welfare than any other profession, and it will help to bring retribution to the politician who commits crimes against the people, as if there were no hereafter reckoning for him. Politicians can not despise the influence of an aroused medical profession.

It is a hopeful sign of prospective reform when periodicals like the *Southern California Practitioner* show their

patriotic condemnation of the treasonable boodler by giving valuable space to the alum crime exposure. The boodle legislator is a traitor and every man worthy to be called a citizen, whatever his calling, condemns the bribe-taking voter or officer and the violator of the sanctity of the citizen's ballot.

Medical men and brethren, help the cause along. To condemn boodling is not taking part in politics. It is protecting the ballot and saving the government of the people, for the people and by the people, from perishing. It is saving the jewel of fair and free government. It is patriotism.

DEATH OF DOCTOR MCCORN.—We are pained to announce the untimely death from mastoiditis of Dr. William Alfred McCorn, one of the able and enthusiastic collaborators of the ALIENIST AND NEUROLOGIST. Dr. McCorn was best known to our readers as the translator of Wernicke's Lectures, which Dr. McCorn had completed before his death. Pending the translation Prof. Wernicke also died. Dr. McCorn was born in Newfield, N. Y., forty-five years ago and was graduated in arts from Cornell, and in medicine from the Medical Department of the University of Buffalo. He died in New York. He was an alienist and neurologist of promise, perseverance and ability and had at various times been connected with New York State hospitals for the insane, and with the Kankakee, Ill., Hospital. He left a widow and one daughter.

AN AMERICAN INTERNATIONAL CONGRESS ON TUBERCULOSIS is to be held October 3rd, 4th and 5th, under the auspices of the Louisiana Purchase Exposition, St. Louis, 1904, and of the American Congress on Tuberculosis, and the Medico-Legal Society of New York. This is the first American attempt to enlist both medical men and laymen in a movement to stamp out tuberculosis. We hope it may result in much good accomplished. Every move to arouse the people to their interests on this subject should be encouraged.

THE GATES ARE OPEN AND THE WORLD IS COMING.--The World's Greatest of World's Fairs has opened wide its hospitable gates and stretched forth its welcoming hands to all the earth and the welcomed world is coming in. Over two hundred thousand of the world's people passed its portals on the first day, and still they come.

The empire of the Mississippi, ceded by the First Napoleon and now transformed into fourteen democratic states, prosperous, resourceful and invincible in all the developments of civilization, is epitomized and symbolized, as well as the works and wonders of the entire world, in this wondrous exposition.

A TEXAS MOTHER OF QUINTUPLETS, all doing well up to date, may or may not have committed race suicide according as she and her Rancher husband may be able to properly care for them.

Race conservation is not altogether in the number of births, but in the vital endowment and rearing of children. The fewer of the neurotically unstable and otherwise morbidly touched both inherently and by post-natal acquisition, and illy cared for up to maturity, the better for the future of the race.

THE BIRTH OF LIBERTY is the title of a remarkably attractive and patriotic dramatic production representing the historical progress of this country from the time of Columbus' discovery to the present, under the management of Will H. Gregory, of the Actor's Society of America.

Our esteemed friend Dr. Russell H. Mace is the author. Good judges of the histrionic art have pronounced this production the most entrancingly patriotic presentation since the dawn of Liberty on this continent.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION will hold its annual meeting at St. Louis, September 13-14-15-16. The headquarters will be at the World's Fair Grounds, at the Inside Inn. The sessions being held in the morning, the members can use the afternoons and

evenings for sight-seeing and, from this excellent location, can change from business to pleasure with a step.

YOUNG'S HOTEL, ATLANTIC CITY, should be in your mind about June 7, 8, 9 and 10, prox., when the American Medical Association meets there. There will be no mosquitoes and no flies about this excellent and popular hostelry. The railway rate is a half fare for the round trip.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION at Atlantic City, June 7, 8, 9 and 10, promises to be a large and scientifically profitable one.

THE CENTURY MAGAZINE for April presents two interesting contributions by medical writers. One by S. Weir Mitchell on George Washington, the other by Prof. Gary N. Calkins on the Protozoa of Disease. This is as it should be. The medical and scientific mind reflected in literature is a thought advance that should be encouraged both by the medical profession and by the non-medical.

INJUNCTION AGAINST DLUGASCH AND FINKELSTEIN, Drug Store 177 Broadway, New York, has been secured by Fairchild Brothers and Foster, prohibiting them the use of the Fairchild name on their substitute goods. A therapeutic substitutor is a thief and sand-bagger of honest reputation and merit especially where Fairchild's meritorious preparations are substituted.

AN ATTACK OF CHOREA and nervous depression is said to be the trouble with one of the Russian admirals. The papers making this report do not state whether the Korea is Russian, Chinese or Japanese. The Russians expect the attack however to end in giving the Japanese fits.

THE FORENSIC ASPECT OF DOUBLE SUICIDE, by Jas. G. Kiernan, which was to have appeared in this number, will, on account of delays, have to be held for the next number. This is an exceedingly interesting paper, as are all of this writer's contributions.

DR. FREDERICK PETERSON'S resignation as member of the New York State Commission of Lunacy has resulted from the unwise partisan policy of Governor Odell.

Dr. Peterson deserves the applause of the profession.

THE AMERICAN NEUROLOGICAL ASSOCIATION will meet at St. Louis, September 15th, 16th and 17th. The Medical Department of the Congress of Arts and Sciences will begin its meeting September 19th.

THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION'S annual meeting will be held at the World's Fair City, from May 30th to June 3rd. Headquarters, Planters Hotel.

DR. EDWARD COWLES has retired from the McLean Hospital, Waverly, and has established an office at Warren Chambers, 419 Boylston Street, Boston.

MISSOURI STATE MEDICAL ASSOCIATION will hold its annual meeting at the Y. M. C. A. building, St. Louis, May 17-20.

CORRESPONDENCE.

(From a Veteran War Surgeon.)

SPRINGFIELD, MO., March 11th, 1904.

PROF. CHAS. H. HUGHES,
St. Louis, Mo.:

My Dear Old Friend.—Dr. Hughes, accept my sincere thanks for receipt of a copy of THE ALIENIST AND NEUROLOGIST, for the month of February, 1904. I have heard it read with much interest.

Your address at Memphis, the article by the Breslau scientist, and the "Life and Health of Our Girls," by Dr. McBride, were particularly attractive.

The article by Dr. Wernicke was especially noted, because it made plain some cases that have come under my notice.

Your address covered such a vast territory in the medical world that it made me feel more and more what a back number I am. Forty years ago I really thought that I was some considerable account, but twenty years or more of partial blindness, and twenty more of total blindness, have prevented my keeping up with the great advance in medical science and the progress made in the use of these wonderful coal tar derivatives so much used by the profession and the people to relieve pain, and depress the heart; that instead of the dear people being allowed to have the assistance of nature in combatting pneumonia, typhoid and other diseases their hearts have been rendered so weak by these powerful depressants that never before in the history of medicine, since the days of Dr. Sangrado, have there been so many deaths. Thousands upon thousands, all over the

country, are reported by the physicians as dying of heart failure! Bah!!

From what I hear, surgery since the civil war, has made many substantial advances, but I doubt very much if you, or any one else, can perform any better operations with more successful results than you did at the DeSoto Hospital during the civil war.

What a long time ago that seems, and how few of the surgeons we knew in those days are on earth.

Trusting this will find you well, and that you will continue many years at the head of the profession,

I remain sincerely yours,

S. H. MELCHER.

SELECTIONS.

CLINICAL NEUROLOGY.

NOTE ON AN ADDUCTOR REFLEX OF THE FOOT.—Dr. R. Hirschberg. Riggs, of St. Paul, calls attention in the St. Paul *Medical Journal* to a note by R. Hirschberg, on this sign in *Révue Neurologique*, August 15, 1903, as follows:

Side by side with Babinski's reflex as a certain indication of disturbance in the pyramidal tracts, may be placed another pathologic reflex,—that of the adductor of the foot.

If, in a person presenting signs of medullary affection indicative of involvement of the pyramidal columns, one strokes the inner edge of the foot, especially near the great toe, with the nail, there occurs a movement, more or less vigorous, but always very well defined, of adduction to the foot. The toes remain immobile and do not take part separately in the motion. When the spasmodic condition is very marked, there will be, together with the adduction of the entire foot, an adduction, more or less pronounced, of the thigh as well.

As a result of his study of a large number of cases, Dr. Hirschberg comes to the following conclusions:

The adductor reflex of the foot is pathologic and never found in physiologic conditions.

When the Babinski is positive, the adductor reflex is always present.

Where the Babinski is not clear or is absent, the adductor reflex may acquire a diagnostic value, pointing to organic affection of the central nervous system.

ARTERIOSCLEROSIS — ANGIOSCLEROSIS.—Thomas E. Satterthwaite (Post-Graduate No. 3) thinks that the former title is a misnomer, since the lesions are not confined to ar-

teries, but are found in capillaries, veins and lymphatics as well. The name angio-sclerosis is therefore more appropriate for the process. The disease runs its course in three stages—endarteritis, atheromatous ulceration and calcification. There are various dangers in this condition, such as nutritive changes in the organ supplied by the vessel, embolism of distant vessels, hypertrophy of the left ventricle, etc. Sometimes the condition is so severe that it results in obliterating arteritis. The author concludes with reports of several cases that show various types of this disease.—*Abstract by C. L. in St. Louis Medical Review.*

TRAUMATIC NEUROSES.—We transcribe to endorse the following from Dr. F. A. Ely, in December *Medical Age*: Nervous symptoms similar to those met with in traumatic hysteroneurasthenia may be noted as the result of sudden and intense mental strain, unassociated with traumatism. Clinical experience and a few isolated postmortem findings indicate that microscopical lesions of the brain and cord may result from traumatism without external evidence of violence. Although we know these minute findings are often present, our knowledge of their effect is as yet insufficient to enable us to differentiate between cases in which they do or do not exist, and their possible presence does not necessarily influence our prognosis. Hysteria must be looked on as a true disease, which may be brought on by traumatism, and which may bring more trouble into a home than a broken limb or a sprained back.

PSYCHIATRY AND THE SIDE-CHAIN THEORY.—Alter suggests that Erlich's side-chain theory may be made applicable to the study of certain nervous diseases. Ceni has been able to demonstrate in the blood of epileptics bodies which he calls autocyto toxins, and progressive paralysis also affords a promising field for similar investigations. In epilepsy the course of events is particularly suggestive of the phenomena postulated by the side-chain theory. The specific toxin of the disease is formed within the body from sources still unknown and is set free in the blood. Its ten-

dency, like that of tetanus toxin, is to attack cells of the nervous system, and having combined with these by means of its haptophore, the toxophore becomes active, the cell protoplasm is attacked and damaged, and an epileptic seizure occurs. The aura represents the incubation period of ordinary infections and corresponds to the time required for the union of haptophore and receptor. During the interval between attacks the haptins are combining with the haptophores and neutralizing the toxin until the latter predominates, when the cells are attacked and another seizure occurs. A somewhat similar line of reasoning may be applied to the phenomena of general paralysis, though the details are still unknown.—*Berliner klin. Wochenschrift*.

A FATAL ENDING OF A SO-CALLED ACUTE CIRCUMSCRIBED EDEMA (QUINCKE'S DISEASE).—(Straüssler, *Prager medizinische Woch.*, 1903, No. 46.)—This apparently idiopathic edema was first accurately described by Quincke in 1882. Considering its acute development and sudden disappearance it is probably a product of an angioneurotic disturbance. The condition is of an innocent nature, but becomes serious when involving any of the mucous membranes, as protracted vomiting when localized in the mucous membrane of the stomach, or a profuse diarrhea if situated in the mucous membrane of the intestines. When in the upper passages, asphyxiation and death frequently results. This angioneurotic form of edema is apparently hereditary, as Osler reports the occurrence in a family of five generations, Schlesinger five cases in four generations and Strübing in the father and son of a family. In Straüssler's case it likewise appears to be hereditary, as the father died suddenly of asphyxiation at the age of 46. A younger brother met with a similar fate. The previous history of the author's patient, a man 23 years old, is, that in his childhood days he had a tumefaction of the neck which made its appearance suddenly. Since the fall of 1902 he had several attacks of an idiopathic edema of the genitals which, after short duration rapidly disappeared.

During the night on the 18th of May, 1903, the patient suddenly awoke and cried out, "I am suffocating." A tracheotomy was rapidly performed. In the subcutaneous and deeper tissues of the neck a large amount of a serous fluid was present, the mucous membrane of the trachea and glottis considerably swollen, and the trachea itself a considerable transudate. The patient died several hours later. The necropsy corroborated the ante-mortem findings in addition to numerous small ecchymosi in the pericardium and both pleurae. The remaining organs were devoid of any pathologic changes.—*Medical Fortnightly*.

PATHOLOGY OF INEBRIETY.—In all cases of inebriety there are, according to T. D. Crothers, (*Journal of the American Medical Association*, January 30, 1904) marked changes in the capillary and vascular system of the brain. The walls of the vessels show fibrinous deposits and sclerosis. The nerve cells and dendrites are altered and retracted, in some cases permanently destroyed; in all inebriates shrunken and disintegrated states exist.

The liver, kidneys, and heart show diminution or enlargement with fibrous and fatty deposits. Both the organic and functional activity of the organ are changed and sclerotic states are present. Conditions of starvation and poisoning exist in all cases.

Pathologic changes are apparent in the paralysis of the sense organs and the higher psychic functions of the brain. These conditions are so common following the use of alcohol, sometimes in its moderate use, but always when taken in excess, as to constitute a pathology that is traced directly to alcohol as the most prominent cause.

The final conclusion is that the peculiar brain and nerve wreckage so commonly seen in persons using alcohol is due to the specific cause, alcohol, following a uniform line of degeneration which is traceable with more or less exactness.

EXOPHTHALMIC GOITER.—Posert opposes surgical treatment as the statistics do not show any more favorable

results than with medical treatment. As we do not know which theory of the disease is correct, it is hard to decide between excision and operation on the cervical sympathetic and the danger of anesthesia is to be considered. Under cocain the operation is bloody and the possibility of fatal hemorrhage is to be considered. A scar is also left and a skillful operator must also be at command, therefore, surgical treatment should not be resorted to until other means have failed. The method he prefers is the use of faradic electricity. It is a nerve stimulant, produces a better blood supply, promotes metabolism and prevents the rapid proliferation of connective tissue which strangles the cells and inhibits the natural function. Nine cases were under his care, of whom five recovered, one died from intercurrent disease and three others have been lost sight of.—*Memphis Medical Monthly*.

EPILEPSY.—In his first communication Kiernan discusses the pathology of epilepsy, the portions of the brain involved and the cause of convulsions. The great elements in epilepsy are the cerebral irritability and the autotoxic state that exists. Elimination is checked, toxic material accumulates and the convulsive centers are excited. Epileptic instability is essentially the lack of balance of the degenerate or hereditary defective, plus, not rarely, a higher ethical and intellectual background.—*Medicine, Detroit*.

THE PATHOLOGY OF GENERAL PARALYSIS.—Dr. W. Ford Robertson, pathologist to the Scottish Asylums, opened a discussion on this subject, illustrated by lantern demonstrations. He stated that the pathogenesis of general paralysis was still unknown with anything like accuracy, and that therefore we had no right to conclude that it would always remain incurable. The syphilitic origin of the disease, though held by the majority of neurologists at the present day, was not yet sufficiently proven. Against the essentially specific theory was the fact that many observers had seen or reported cases of general paralysis in which syphilis had not previously occurred, congenitally or other-

wise, and that many cases were not known in which the virus was contracted after the onset of the symptoms of general paralysis. Although statistics might show a high percentage of antecedent syphilis in cases of general paralysis, the fact was incontrovertible that only a very small proportion of syphilised persons ever developed general paralysis or tabes dorsalis, and that therefore the doctrine—no syphilis, no general paralysis—could not be entertained. Similar statistical evidence could be adduced showing that very high percentages of persons affected by tuberculosis had previously had measles, yet they did not believe any direct causal relations existed. Moreover, the syphilitic hypothesis did not explain the established fact that there were other conditions, such as chronic alcoholism, lead poisoning, and excessive meat diet, which favored the development of general paralysis. *Post mortem* examination of the non-nervous organs or tissues of the body in cases of general paralysis showed that an active bacterial toxæmia was present. Dr. Lewis Bruce and Dr. Robertson had directed attention to the gastro-intestinal disorders that occurred in cases of general paralysis, and had published their belief (*British Medical Journal*, June 29th, 1901) that general paralysis was dependent upon a toxemia of gastro-intestinal and bacterial origin, but Dr. Bruce had since modified his view so as to regard toxic infection by the *bacillus coli* as a secondary or terminal infection. More recently Dr. G. D. McRae, Dr. John Jeffrey, and Dr. Robertson had advanced the hypothesis that general paralysis was the result of a toxæmia dependent upon the excessive growth of bacteria, not only in the alimentary canal, but in the nasal tract and throat; and especially that of a diphtheroid bacillus, which gave the disease its distinctive characters. The recognised causes of general paralysis—syphilis, etc.—appeared to act as stimulants of the leucoblastic tissue of the bone marrow, or directly damaged this tissue, so that the defences of the body against the invasion of bacteria were diminished or damaged. The protective functions of the body were thus impaired, and in such circumstances the bacteria normally present as saprophytes assumed a pathogenic character by

reason of the protective forces of the body being weakened. The view was advanced that the special infective agent was an attenuated form of the Klebs-Löffler bacillus. The symptoms during life and the appearances *post mortem* were all in favor of the hypothesis of bacterial infection. Cultures were made in *post mortem* examinations of twenty cases of general paralysis, the nasal or intestinal contents being used for this purpose. In seventeen of these cases, in addition to other bacteria, the diphtheroid bacillus was found in the cultures, whilst in the remaining three the bacillus was found by other means of detection. In eight out of the twenty cases the diphtheroid bacillus was found in very great numbers. A recent series of cultures from the secretions of the nose and throat of ten general paralytics in the Edinburgh Royal Asylum showed that the diphtheroid bacillus was present in nine cases. Out of sixteen cases of general paralysis where cultures were made from the brain *post mortem*, four showed the presence of the diphtheroid bacillus. The bacillus in these four cases must have obtained an entry either by the blood or by local infection through the nose. Experiments had been made with the diphtheroid bacillus introduced into the alimentary canal of rats with positive results—showing changes in the nerve-cells of the brain. The whole body of facts therefore supported the view of the specific bacillary origin of general paralysis of the insane.—*Brit. Med. Ass'n, 1903 at Swan Sea.—Journal Medical Science, England.*

CAVITIES IN THE SPINAL CORD.—Dr. R. S. Rows pathologist of the Lancashire County Asylum, Whittingham, read a short paper and exhibited lantern slides illustrating three different cases in which cavities in the spinal cord were found. In the first of these the cavity formation was due to atrophy of the nervous tissue and neuroglia, in the second to syringomyelia, and in the third to hæmorrhage into the perivascular spaces and substance of the spinal cord.—*Journal Medical Science College, Brit. Med. Ass'n, 1903, Annual Meeting.*

NEUROPHYSIOLOGY.

NERVE REGENERATION has been recently investigated by a number of observers, especially Ballance and Purvis Stewart, in England, and in this country by Howell, Huber and Cushing. Ballance and Stewart have taught that cut nerves regenerate not only from the central stump, as Waller originally taught, but also in the periphery. Howell and Huber have found that while in the peripheral portion of a cut nerve some preparation for regeneration may be noticed, the axis cylinder, the essential part of the new nerve regenerated only from the central portion. In confirmation of this, Mott and Halliburton found a great activity of neurilemma cells, which, by the Golgi staining, may resemble nerve fibres, but are not true nerve fibres. This conclusion has been confirmed by the studies of Langley and Anderson at the University of Cambridge in England.

In clinical surgical reports there are certain cases which seem to contradict entirely the teaching of the necessity for new growth of nerve fibres, since apparently they point to direct union of severed ends and almost immediate re-establishment of nervous transmission. Cut nerves are sewed together and feeling is noted very soon afterwards. In these cases Professor Halliburton is convinced that it is not the physician who is at fault in his investigations, but the patient who, because of an eminently suggestive mood, wrongly interprets the sensations present. As a rule, whatever sensations may be supposed to be present in the region supplied by the cut nerve, they soon pass off and the true restoration of nervous function takes many weeks or even months, but true return of function, both sensory and motor, has followed nerve anastomosis.—*Editorial Medical News, Feb., 1904.*

THE ETHICS OF EATING.—The influence of the mind over the body is perhaps nowhere better illustrated than in the relation between psychic conditions and digestion. We recently emphasized the value of the deliberate and thorough mastication of food, and took occasion to say that how one

eats is often of more importance than what one eats. In the treatment of dyspepsia, it is important to secure freedom from anxiety, pleasant surroundings and such other accompaniments as conduce to enjoyment in eating. Pawlow's classical experiments on gastric secretion in dogs led him to some important conclusions on this subject. One of them is that food eaten without relish and without appetite, although in itself most nutritious and supposedly easy of digestion, may remain for hours in the stomach undigested. The same result often follows when food is eaten while the mind is diverted to other things, especially in case of anger, anxiety, preoccupation, etc. Pawlow says that the old and imperative requirement that food should be eaten with interest and enjoyment is the most emphasized and strengthened of all his conclusions. Thus food which is nutritious and of the best quality may remain undigested because it lacks presentation in an attractive form, or is served amid unpleasant surroundings. Pawlow even says a good word for the preliminary cocktail, or the use of some alcoholic in small amounts, as these, by producing slight exhilaration, divert the mind from unpleasant surroundings, and may enable one to forget cares and worries. It is hardly necessary to suggest, however, that this remedy may be more harmful than otherwise. But the enjoyment of eating is the important factor, and of many harmless means to secure this end, it matters little which means is used provided the end be secured. It is well to call attention again to this well-known fact; here is the solution of many an indigestion problem, especially among business men in cities. The psychologic factor in this important function is not to be forgotten.—*Journal A. M. A., March, 1904.*

NEUROTHERAPY.

VENESECTION IN OPIUM POISONING.—William A. Caskie declares that when all other efforts have failed to rouse the patient from a comatose condition, venesection may restore the patient to consciousness by the abstraction

of some of the poison circulating in the blood, thereby preventing its re-absorption, and relieving in some degree the paralysis of the nervous system. This treatment has met with great success.—*British Medical Journal*.

A COMPARISON BETWEEN THE MEDICAL USES OF THE X-RAYS AND THE RAYS FROM THE SALTS OF RADIUM.—Francis H. Willikins presents this brief summary of his paper: (1) The rays from radium salts, unlike the x-rays, are not serviceable in diagnosis, either by means of radiographs or of fluoroscopic examinations. (2) The Beta rays are useful as a therapeutic agent in certain skin diseases and new growths, if the diseased tissues are superficial or are not more than about 1.25 cm. (one-half an inch) below the surface of the skin or accessible mucous membranes. (3) The Beta rays from radium salts will heal some cases of new growths that are not healed by the x-rays, and they act more promptly, but not over so large a surface at one time as the x-rays. (4) Radium salts of an activity of 8,000, or considerably more, are not sufficiently strong to be efficient. Pure radium salts which have a radio-activity of about 1,500,000 are not too strong for the work to be done. (5) The radiation from radium salts, unlike that from the x-ray tube, is uniform. (6) Great care should be exercised to avoid burns.—*The Boston Medical and Surgical Journal*.

ANALYSIS OF GLUTEN FLOURS.—Those who for years have been prescribing gluten bread in the treatment of diabetic conditions will read with surprise the recent analysis published by the New Hampshire State Board of Health. The chemist of this department who made a careful examination of fourteen preparations of gluten flour now on the market was able to find in most a large percentage of carbohydrates, that is, the smallest ratio was 7.8 per cent while the largest was 75.25 per cent.

In commenting on these facts, he states: "Our results agree with other published analyses in showing that many of the so-called diabetic foods, or gluten flours, are of the

same composition as whole wheat or Graham flour, and carry but little less starch than ordinary white flour. Some of the highly recommended and widely advertised "diabetic flours" consist solely of whole wheat flour, and by reckless misstatement and deliberate fraud are sold at enormous prices as a cure for diabetes. The actions of these manufacturers becomes not only fraudulent but even criminal when we realize that these goods which are sold to invalids are backed up by the most absurd claims for usefulness, and are thereby used freely with positive detriment to the sufferer." The above sentiments are not too strong to characterize the action of those who fill their coffers at the expense of the unsuspecting invalid. The physician who recalls his series of diabetics, will now better understand the unsatisfactory progress of his cases and naturally will not look upon such disclosures as these with feelings of equanimity.—*Wm. C. Wile, the Danbury Medical Newsmen of the New England Medical Monthly.*

SUCCESSFUL TREATMENT OF TETANUS.—The newspapers of this city have noted recently the recovery from tetanus of a Brooklyn boy after the injection of antitoxin into the spinal sheath. This method was first practiced, we believe, by von Leyden in 1901, and five cases with three recoveries were reported in the *Journal of the American Medical Association*, in 1902. *The Lancet*, for March, reports four cases with three recoveries. This is a much more simple method than trephining the skull in order to make intracerebral injections, and appears to be equally efficacious.—*New York Medical Record.*

EXCLUSION OF MENTALLY DEFECTIVE IMMIGRANTS.—A state board of expert sanity inspectors, to be stationed at Ellis Island, to inspect immigrants as they land, with a view of detecting those in such stages of mental decline as would lead to their becoming a public charge, is provided for in a bill introduced recently in the New York legislature at Albany, in behalf of the State Commission in Lunacy. Although there is a question as to the jurisdiction of the State

of New York over the matter of immigration, it is said that the United States Commissioner of Immigration is in favor of the proposition, and that the necessary permission would be instantly granted by the government.—*New York Medical Record*.

QUININ AND THE MALARIAL PARASITE.—It has long been known that quinin has the property of fluorescence; that is, of raising the pitch of light waves that fall on it, so that it turns white light to a bluish tint. That this property may be closely connected with its ability to destroy malaria has been suggested by a recent writer, says Dr. A. Cartaz, writing on the subject in *La Nature*, Paris, February 7:

"It is 50 years since Dr. Maillot indicated that the sole effective agent for fighting malaria was the use of quinin. . . . Up to this day quinin is administered at the first appearance of the disease, and it is well known that but few cases withstand the treatment.

"How does quinin act? We might answer, as in Moliere's time, that just as opium causes sleep by its soporific virtue, so quinin cures fever because it is febrifuge. Formerly, for this as for so many other drugs, it was necessary to content ourselves with a somewhat simple interpretation. The nature of most maladies was unknown, and of the action of the drug we were forced to be in still deeper ignorance.

"Now, however, we know that malaria is due to the presence of a parasite in the blood; it has been discovered very recently that this parasite penetrates the body by the bite of a mosquito. Now the parasite of malaria scarcely ever develops except in darkness. Is it the red color of the blood that favors its life and the violet rays that interfere with its evolution? This is the theory advanced by an American physician, Dr. King, in an interesting work. According to him, quinin is a fluorescent substance, and it is through this fluorescence that it acts as a destroyer of the malaria parasite.

"The arguments given by Dr. King to support his view have plausibility. Two vegetable substances already employed as remedies for malaria, esculin and fraxin, the ac-

tive principles of the horse-chestnut and the ash, give the blue rays. Iodin, which is not fluorescent, finds in the system starchy substances with which it combines to form an intensely violet-blue combination. Methylene blue, recently prescribed in forms of chronic malaria, and in inveterate neuralgia, would also act by the emission of rays that are hurtful to the parasite.

"It has been long recognized that the absorption of the quinin increased the fluorescence of the blood, and that this lessened or increased according to the doses prescribed and to the lapse of time since the ingestion of the salt. The parasite, then, like many microbial agents, must be disagreeably influenced by the violet rays.

"There is a slight objection to this theory, which is that we meet cases of malaria that resist quinin salts. Dr. King admits that there are refractory cases, but then, he asserts, the attacks are due to the undeveloped and not to the complete parasite. The undeveloped parasite is found especially in the deep organs and the more obscure parts of the body. In these conditions the destructive action of quinin can not take place, for its fluorescent power is then nearly absent.

"If King's theory is true we might try (and the experiment would probably not be especially dangerous) to administer to malaria patients substances possessing this fluorescent property in a very high degree. Certain newly discovered metals, such as radium, would perhaps succeed in cases where quinin has proved powerless.—*From a Translation made for the Literary Digest.*

RADIOTHERAPY DOSAGE.—By means of the radiochromometer of Benoiet the intensity of the x-ray can be measured. The instrument is made of a very thin silver disk, surrounded by twelve plates of aluminum, having thicknesses ranging from one to twelve millimeters. The principle of this mechanism depends on the variability of the proportion which exists between the absorptive power of the silver and that of the aluminum, which varies directly in proportion to the power of the rays. With weak rays the

silver absorbs as much as the thinnest disk of aluminum, while the thickest aluminum disk does not absorb more light than the silver, thus allowing all the intermediate degrees to be noted. When the radiochromometer is exposed over a sensitive plate to a luminous tube the photograph gives twelve shades corresponding to the twelve aluminum plates, and in the center of them is the shadow of the silver disk. The aluminum disk shadow that corresponds in tint to the shadow of the silver disk indicates the intensity of the rays given off by the tube.—*A. Béclère in La Presse Médicale.*

NEW ELIXIR OF LIFE.—Each ninth life of a cat in the future will be continued indefinitely according to the latest discovery and a new combination of the salt solution made by Dr. Hamilton Forline, of Chicago. Despite this fact, Dr. Forline is not a lover of cats. These he uses merely as a means to an end. He hopes in the future to prolong and restore human life, says the *Chicago Inter-Ocean*.

The latest test of the efficiency of the salt solution was made after the Iroquois theatre fire. One boy whose heart had ceased beating for several minutes was brought to life for a few seconds. On others who were near the point of death the solution acted as a stimulant. At present its broadest field lies in its effects upon spinal disease. After the heart has ceased beating for ten minutes the solution is effective.

Dr. Forline said the other night: "This is an entirely new discovery. The elements in the solution have been tried separately and have proved successful stimulants, but this combination has never been tried by any one. Five per cent. of the solution is a common salt solution extract from the sub-arenal glands of animals, and three per cent. is of orchitic fluid and strychnine. There are also other elements. The quantity of strychnine used depends on the seriousness of the case.

"The application of the solution is also a new feature. Instead of injecting it into a vein, it is injected into the sub-arachnoid in the spinal column. The cerebro-spinal fluid is removed with the needle and in its place is put the solution.

This goes directly to the vital center of the brain, which controls the heart action and causes it to begin pulsating.—*The Daily Medical*, Vol. 1, No. 6.

THE ETIOLOGY AND PATHOLOGY OF ARTERIO-SCLEROSIS.—H. B. Anderson gives as the sequence of events in the development of arteriosclerosis, a weakening of the media; dilation of the vessels and slowing of the blood stream; and a compensatory sclerosis of the intima. These stages do not occur consecutively in the different parts of the vascular system, but the weakening and compensation proceed hand in hand, especially in the early stages of the disease. The stress of the causative factors in different cases falls upon different parts, producing much diversity as to the frequency and degree with which particular vessels are affected. For this reason arteriosclerosis is of far more frequent occurrence, and shows far more advanced lesions than phlebosclerosis. Rokitansky enumerates the following parts of the arterial system in the order in which he thinks the relative frequency of their involvement occurs: The ascending arch, then the abdominal and thoracic parts of the aorta. Next follow the splenic, the femoral, the internal iliac, the coronaries, the cerebral, the uterine, the brachial, and the subclavian. Such, from the microscopical examination of the arteries in one hundred autopsies, found sclerosis most common in the arteries of the limbs, and the anterior tibial most often affected of all. Continuous high tension, increased by mechanical stress, explains the involvement of the aorta and its branches as the coronaries; strain and variations in pressure from muscular action account for the tendency to the disease in the upper extremities of manual laborers; the vessels of the lower extremities also support not only the hydrodynamic, but also the hydrostatic pressure of the blood. On account of variations in pressure associated with digestion, the splenic artery is likewise exposed to the disease. The frequency of the disease in the cerebral vessels is related to the functional requirements of a well maintained blood supply, increased by occupations attended by long continued mental

effort and worry. The kidney vessels are especially exposed to the causes of the disease from the fact that they are brought into contact with toxic substances in process of excretion. The forms in which arteriosclerosis manifests itself have been divided into the nodular, the diffuse, and the senile. Osler says that longevity is a vascular question. The nutrition and function of every organ is absolutely dependent upon a proper blood supply. Many conditions commonly recognized clinically as distinct maladies are really manifestations of this protean disease. The writer concludes by calling attention to the importance of general nutritional disturbances, the symptoms varying with the seat, extent and distribution of the vascular lesions, so that an endless variety of clinical phenomena is possible, according as the blood supply to this or that part is chiefly affected.—*American Medicine*.

THE INTENSITY OF CHOLERA AMBOCEPTOR FORMATION AFTER ALCOHOLIC INTOXICATION AND MIXED INFECTIONS.—Friedberger (*Berlin Klinische Wochenschrift*) injected dead cultures of cholera vibrios into rabbits previously treated with alcohol. The antibody formation was measured by determining the amount of serum sufficient to protect a guinea pig against ten times the fatal dose of cholera vibrios. By this method it was found that a single dose of alcohol given at the same time as the immunizing injection serves to increase the antibody formation two and one-half times. This is in accord with the beneficial results observed by clinicians in the administration of alcohol early in infectious diseases. On the other hand, the animals subjected to chronic poisoning with alcohol produced a serum sixteen times weaker in antibodies than that of the control animals. This bears out the observation that in epidemics it is the alcoholics who succumb first. Animals injected with mixed cultures of cholera and other organisms, such as typhoid bacilli or those of rabbit septicæmia, produced a serum from six to forty times weaker in antibodies than that of the control animals who had received only cholera culture.

THE TREATMENT OF SERIOUS EFFUSIONS.—The

author describes what is evidently a new method of treating serious effusions. The idea occurred to him to inject one fluidrachm of Adrenalin Chloride Solution into the pleural sac, in a case of abdominal cancer extending to the pleura, after the aspiration of a large quantity of bloody serum, the object of the injection being to lessen the secretion. There was no further secretion, consequently no further tapping and the patient spent the remainder of her life in perfect comfort, so far as her chest was concerned.

This treatment was extended to cases of ascites due to hepatic cirrhosis in which marked results were not expected. However, the rapidity of secretion was diminished and no ill effects were noted, the quantity of Adrenalin Solution used varying from two to three fluidrachms.

In a case of pericarditis with effusion, in a lad, 19 fluid-ounces of serum were withdrawn from the pericardium, but a reaccumulation rapidly followed. The patient's condition becoming critical the paracentesis was repeated, 20 ounces fluid being withdrawn with immediate improvement in the quality of the pulse. Forty minims of Solution Adrenalin Chloride, 1-1000, was injected into the pericardium. The pulse at the wrist disappeared, the boy became of an ashy leaden hue and had an anxious expression. Immediately nitroglycerin and atropin were administered and the boy quickly rallied. No further tapping was required. The same patient had a subsequent attack of left pleurisy with effusion. Ten fluidounces of serum was withdrawn from the chest and one fluidrachm of Adrenalin Chloride Solution was injected. There was no reaccumulation.

In a case of tuberculous peritonitis and ascites 200 fluidounces of serum was drawn and two fluidrachms of Solution Adrenalin Chloride introduced into the peritoneal cavity, with four pints of aseptic air (to prevent adhesions). Thirteen days later 237 fluidounces of serum were withdrawn and two fluidrachms of Adrenalin Chloride Solution and two pints of air were injected. Upon a third occasion, eleven days later, 196 fluidounces of serum were obtained by tapping, and three fluidrachms of Adrenalin

Chloride Solution and four pints of sterile air were injected. No reaccumulation of fluid occurred.

A female child of seven years was the next patient. One pint of fluid was withdrawn from her pleural cavity and one fluidrachm of Adrenalin Chloride Solution and half a pint of sterile air were injected. Though it was highly probable that the pleurisy was tuberculous, there was no reaccumulation of fluid and the patient recovered.—*James Barr, M. D., F. R. C. P. The British Medical Journal, March 19, 1904.*

NEUROSURGERY.

RESECTION OF THE CERVICAL SYMPATHETIC.—The writer, after studying his own records, as well as those of other operators regarding the influence of resection of cervical sympathetic in optic nerve atrophy, and hydrophthalmos and exophthalmic goiter, formulates the following conclusions: Excision of the superior cervical ganglion of the sympathetic nerve is worthy of a trial in those cases of simple atrophy of the optic nerve which resist measures less heroic. It is yet impossible to say whether the bilateral operation is advisable in unilateral optic nerve atrophy. The value of sympatheticectomy in congenital hydrophthalmos has not been demonstrated. In exophthalmic goiter complete excision of the cervical sympathetic is followed by a larger percentage of cures than is any other procedure. Thus far no deaths have been recorded. The number of operations, however, is small and final conclusions can be announced only after a large number of cases shall have been treated by this method.—*J. M. Ball, Journal of the American Medical Ass'n, January 30, 1904.*

NEUROPATHOLOGY.

THE ETIOLOGY OF SLEEPING SICKNESS.—(A. Castellani in the *Lancet*, March 14, 1903.)—The organism which Castellani describes as the cause of sleeping sickness he has grown in pure culture in eight out of ten *post mortem* ex-

aminations from the cerebro-spinal fluid and from the heart's blood. During life he has found the organism but once in the blood, but has grown it in two out of three cases from the cerebro-spinal fluid obtained by lumbar puncture.

He describes the germ as a distinct variety of the streptococcus group, its morphology varying, according to the media and the age of the culture, from long chains to typhoid diplococci. Frequently well defined mucoid capsules are made out, and in hanging drops well defined Brownian movements are seen. The organism stains with the ordinary aniline dyes. The organism grows well on agar, being much more vigorous than the streptococcus pyogenes or the streptococcus lanceolatus. The colonies show a marked tendency to coalesce; still in some cases the growth may be much more delicate than usual, and the colonies may remain separate. In stab culture the growth takes place luxuriantly along the stab, the surface growth being more delicate. There is no gas formation in sugar agar. Litmus remains unchanged. There is a slight growth on potato. Gelatine occasionally shows a slight liquefaction after five or six days and a well marked growth.

The appearance of bullion cultures varies greatly. In most cases the bullion remains clear and there is a flocculent sediment. Sometimes the bullion is cloudy, with little or no sediment. These sediments show chain and diplococci forms.

The organism grows well on serum. There is no coagulation of milk, in this respect differing from the streptococcus pyogenes. The organism is a facultative anerobe. The agglutination experiments have not been carried to any extent, but they would seem to be positive.

Castellani claims that this organism differs entirely from the diplococcus isolated and described by the Portuguese commission.

In the *Lancet* of May 23, 1903, the Portuguese commission replies to Castellani. They claim to have described a diplostreptococcus derived from the cerebro-spinal fluid and arachnoid exudate in several cases of sleeping sickness in 1900, and in a second report in 1902 the cultural characteristics of

the organism were fully described, and are identical with those discussed by Castellani. This, however, is a mere contention of priority. It would seem that the organism described is the true cause of sleeping sickness.—*Maryland Medical Journal*.

REPORT OF A CASE OF BRAIN TUMOR INVOLVING THE RIGHT LATERAL VENTRICLE.—Leszynsky (*Medical Record*, January 30, 1904.)—On account of the rarity of the location of this brain tumor, the case merits abstracting. Resume of the case: Girl, nineteen years, no trauma or history of infection, is attacked by severe headache. Vomiting and vertigo, with blindness. These symptoms are progressive and constant, with the addition of astereognosis of the left hand, slight left hemiparesis, with hyperesthesia and convulsive attacks, limited to the face for several months, afterwards becoming general. An exploratory operation was made, but no definite evidence of tumor was found in the field of operation, which was over the fissure of Rolando, laid bare by a flap $3\frac{1}{2}$ by $3\frac{1}{2}$ inches. At the autopsy a tumor was found beneath the parietal portion of the right ventricle. The tumor was about the size of an egg. The tumor was in all probability a glioma, though no gliomatous cells could be demonstrated.—*Interstate Medical Journal*.

CASE OF PNEUMOCOCCAL MENINGITIS AND SOME RECORDS OF THE VALUE OF THE CYTOLOGICAL EXAMINATION IN CASES OF MENINGITIS.—Warrington (*Review of Neurology and Psychiatry*).—An account of ten cases of meningitis due to different causes, in which the diagnosis was made or substantiated by the examination of the cerebro-spinal fluid. In two of the cases here described the diagnosis could be made in spite of the absence of Kernig's sign. The author has found the formula to be true, as noted by previous investigators, namely, that in acute non-tubercular meningitis, a leucocytosis is found, while in tubercular disease a lymphocytosis. The author is in agreement with the conclusion of Campbell, that a positive cytological result from the exami-

nation of the cerebro-spinal fluid is the most valuable single objective symptom we are acquainted with.—*Interstate Medical Journal*.

CLINICAL PSYCHIATRY.

THE PSYCHOLOGY OF OCCUPATION.—After many years of inquiry an Italian savant, Ferriani, has constructed a scale showing the varying degrees of professional jealousy that exist in the different professions. He finds that among architects there exists the least. Following them come clergymen, lawyers and military men. After these he places professors of science and literature, journalists, authors, doctors and actors. From his classification it would seem that in only one other profession does jealousy exist to the extent that it does in medicine. It is indeed unpleasant to think that this investigator is right, but candor compels us to acknowledge to ourselves that we are a jealous lot. The average medical man is a good fellow among his colleagues until he commences to reach the top, and then he is immediately looked on with jealousy, and many mean and vicious remarks are made about him which would have been left unsaid had he never risen above mediocrity.—*Medical Age*. Who can minister to this morbid mind symptom among our colleagues?

PSYCHOTHERAPY.

SIN AND DROPSY.—A woman who died in Mount Vernon recently under the ministrations of a deluded woman, had been ill three months with "dropsy," and died without treatment and apparently without an accurate diagnosis. According to the deluded husband, the load of original sin in the woman, manifested by dropsy, was too much for the female exorcisor, and the sufferer, therefore, had to die. The coroner very properly held an inquest on the case, and a verdict was rendered against the faith-curer accordingly.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

THE WORTH OF WORDS. By Dr. Ralcy Husted Bell, with an Introduction by Dr. William Colby Cooper. Hinds & Noble, Publishers, 31-33-35 W. 15th St., New York City. The Worth of Words as a study of accuracy of diction is worthily worth the price, to say nothing of the printer's and publishers' excellent work on the book. The book will prove a help to such as have special need of studying the exact meaning of words. The book is a good supplement to any thesaurus. Nice discriminations in the significance of words is too often neglected in medical, as well as literary writing, and their weight, as well as worth in description, is not always adequately appreciated.

THE MAN WHO PLEASES AND THE WOMAN WHO CHARMS, aims to show the points of conduct, the marks of breeding that spell success, and has success as its aim. The injunction to "look out lovingly upon the world, and the world will look lovingly in upon you" is forcibly put in its pleasing pages, as the third edition, revised, before us proves in the reading. Hinds & Noble, New York, are the publishers.

PEARCE ON NERVOUS DISEASES. This treatise is for the medical student and general practitioner. It is written by F. Savary Pearce, M. D., Professor of Mental and Nervous Diseases in the Medico-chirurgical College of Philadelphia. There are 400 pages; 91 text illustrations, plain and colored. Dedicated to S. Wier Mitchell, and published by D. Appleton & Company, of New York.

Pearce's Practical Treatise is just what is needed for the general practitioner to perfect himself in the essentials

for the successful practice of Neurology. In four hundred pages, consisting of twenty chapters, the ground is thoroughly covered, for the purpose for which it is designed. The anatomy, physiology and chemistry of the nervous system and its pathology first discussed, make for definite understanding of the cause, signs and symptoms in nervous disease. The significance of the reflexes is also a matter made clear. The chapter on general therapeutics and the acquirement of nervous health is well presented, and is a classic on the subject. Symptomatic disorders and the practical application of massage, with a concise exposition of the rest treatment are amply considered.

Diseases of the cranial, peripheral and spinal nerves are studied with care. Diseases of the brain, its membranes and morbid growths are lucidly presented. The general functional nervous diseases make an important part of the volume. The divisions of Writer's Cramp and Railway Spine are lucid and important from a medio-legal view point.

Vaso-motor and trophic disorders are well explained and elucidated by photographic reproductions. Rheumatoid arthritis is placed under this class.

General toxæmic disorders, drug intoxications, general paresis and disorders of sleep in the appendix finish the volume. Altogether this work is one of the very best for the class-room now on the market. Its size is convenient to carry about, its price moderate, and the work of the publishers is well done.

SAUNDERS' AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1904. A Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of George M. Gould, A. M., M. D. In two volumes. Volume I, including general medicine, octavo, 673 pages, fully illustrated. Volume II, general surgery, octavo, 680

pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Per volume: Cloth, \$3.00 net; Half Morocco, \$3.75 net.

The American Year-Book of Medicine and Surgery continues to maintain its high place among works of its class. Indeed, the issue of 1904, now before us, if anything, is even better than the excellent issues of previous years. Such a distinguished corps of collaborators which the editor, Dr. George M. Gould, has enlisted as his assistants is sufficient guarantee that the essential points of progress are brought out, and the collaborators' notes and commentations are excellent. In the illustrative feature the 1904 issue fully maintains its reputation, there being fourteen full-page insert plates, besides a number of excellent text-cuts. We pronounce Saunders' Year-Book for 1904 the best work of its kind on the market, as it has always been, and may have occasion later to refer to some of its excellent features in our editorial pages.

**SUBJECTIVE SENSATIONS OF SIGHT AND SOUND, Abi-
atrophy and other Lectures.** Being the second series of Lectures on Diseases of the Nervous System, by Sir William R. Gowers, M. D., F. R. C. P., F. R. S., Honorary Fellow Royal College of Physicians of Ireland. Member of the Soc. of Medecins Russes of St. Petersburg and of the Royal Society of Science of Upsala, etc. Philadelphia. P. Blakiston's Son & Co., 1012 Walnut St. 1904.

This is probably the best and most valuable clinically, to the general, as well as neurological diagnostician, of all the author's many meritorious productions. The study, from the author's standpoint of long and extensive clinical experience, of subjective visual and sound sensations and abiotrophy, or diseases from defect of life which constitutes the three first chapters, makes ninety-six pages of instructive reading matter, which can not be dispensed with by any physician who would become an up-to-date diagnostician.

The remaining chapters on a distal form of myopathy,

metallic poisoning, syphilitic diseases of the nervous system, inevitable failure, syringal hemorrhage into the cord, myasthenia and ophthalmoplegia and the use of drugs, are likewise indispensable to the modern practitioner of medicine.

In placing this valuable, latest work of this eminent neurological authority before the American Medical Profession at a moderate price, Blakiston's Son & Co., the well-known publishers of Philadelphia, have conferred a signal benefit on the American Profession of Medicine and added further to their already well-earned reputation as publishers of preeminently good medical books.

HOW TO ATTRACT AND HOLD AN AUDIENCE. By J. Berg Esenwein, A. M., M. B., Professor of the English Language and Literature in Pennsylvania Military College. Hines & Noble, Publishers, New York City. Cloth. 12mo. Pp. 272. Price \$1.00 postpaid.

This interesting and instructive volume ought to be read by all medical men, especially, who have ambition to make a good impression for themselves and their calling before audiences. The best informed of all the professions is often placed at disadvantage, as compared with lawyers, divines and others, by the lack of fluency and eloquence of speech and logical diction. We cordially commend this valuable book.

CONTRIBUTORS TO "THE MEDICAL BRIEF," whose portraits have appeared in 1903, is the title of a handsomely executed pamphlet from *The Medical Brief* office, St. Louis, Mo., dedicated to contributors and friends, containing thirty-two portraits printed in half-tone, on very heavy coated paper. The typographical part of the work is a credit to any firm, and, as a whole, makes a handsome souvenir. Some of the portraits are Dr. W. Gill Wyllie, of the New York Polyclinic; Dr. A. H. Goelet, of the New York School of Clinical Medicine; Dr. Finley R. Cook, of the New York Academy of Medicine; Dr. Joseph Priestley, London, England; Dr. R. T. Morris, of the New York Post Graduate; Dr. C. A. Wilson Prevost, of New York; Dr.

Cyrus Edson, of New York, and our old friend and collaborator, Dr. Thos. H. Manley, of the New York School of Clinical Medicine. The picture of the editor and owner, Dr. J. J. Lawrence, leads all the rest.

Flatulence, Meteorism and Tympanites. By Charles D. Aaron, M. D., Detroit, Mich., Professor of Clinical Gastro-Enterology and Lecturer on Dietetics in the Detroit College of Medicine; Consulting Gastro-Enterologist to Harper Hospital, etc.

The Boy's Venereal Peril. Elaborated from a paper with the same title, read at the Fifty-Fourth Annual Session of the American Medical Association and published in the *Journal of the American Medical Association*, July 4, 1903.

Twenty-Fourth Annual Report of the State Hospital for the Insane, Southeast District of Pennsylvania, Norristown, Pa., for the year ending September 30, 1903. D. D. Richardson, M. D., Resident Physician.

Chionia, a Vegetable Hepatic Stimulant. Advertised to the medical profession only. Prepared from *chionanthus virginica*, from which the inert and objectionable features of the drug have been eliminated.

Report of a Case of Acute Melancholia Treated by Mechanical Vibration, with Illustration and Explanation of the Author's Diagnostic and Treatment Chart. By Lucy Hall Brown, M. D., Brooklyn, N. Y.

Peacock's Bromides. Advertised to the medical profession only. Each fluid drachm represents fifteen grains of combined chemically pure bromides of potassium, sodium, ammonium, calcium and lithium.

The Trend of Modern Psychiatry and its Relation to General Medicine. Read at the Fifty-Fourth Annual Session of the American Medical Association, in the Section on

Nervous and Mental Diseases, and approved for publication by the Executive Committee, Drs. Richard Dewey, H. A. Tomlinson and F. W. Langdon. By John Punton, M. D., Kansas City, Mo.

The Principles of Diagnosis of Medical Malingerer. By John Punton, M. D., Kansas City, Mo., Member American Neurological Association, Editor *Index-Lancet*, etc.

Third Annual Report of the New York State Hospital for the Care of Crippled and Deformed Children, for the year ending September 30, 1903, Tarrytown, N. Y.

Reports of the Trustees and Superintendent of the Butler Hospital, Providence, R. I., presented to the Corporation at its Sixtieth Annual Meeting, January 27, 1904.

The Bicycle as a Therapeutic Agent. By Luther Halsey Gulick, M. D., Director of Physical Training of the Public Schools in the City of New York.

Announcement of the Psychopathic Hospital, Department of the New York Infirmary for Women and Children, 321 East 15th St., New York.

Treatment in Four Hundred and Forty-Two Cases of Movable Kidney Without Surgical Intervention. By Charles D. Aaron, M. D., Detroit, Mich.

Abnormal Frequency of Urination Treated with Epidural Injections. By Ferd. C. Valentine, M. D., and Terry M. Townsend, M. D., New York.

Education the Fundamental Principle in the Prevention of Pulmonary Tuberculosis. By Chas. Wood Fassett, M. D., St. Joseph, Mo.

The Development of Obstetric Surgery. By James U. Barnhill, A. M., Ph. D., M. D., Columbus, Ohio, Pro-

fessor of the Principles of Surgery and Clinical Surgery, Ohio Medical University; Surgeon to the Protestant Hospital; Formerly Surgeon to the Columbus Hospital for Women; Editor Columbus *Medical Journal*.

Forty-Sixth Report of the Nova Scotia Hospital, for the Year 1902-1903, Halifax, N. S. By Commissioner of Public Works and Mines.

Sixth Annual Report of the Managers of the New Jersey State Village for Epileptics, for the year ending October 31, 1903.

Korsakoff's Psychosis. Report of Cases. By Harry W. Miller, Pathologist and Assistant Physician Taunton Insane Hospital.

The Management of Exacerbations in the Course of Pulmonary Tuberculosis. By John F. Russell, M. D., New York.

Thirtieth Annual Report of Medical Director, Dr. F. W. Langdon, of the Cincinnati Sanitarium, November 30, 1903.

Results of an Experimental Treatment of Epileptic Insanity. By J. W. Wherry, M. D., Clarinda, Iowa.

The Significance of the Convulsion in Idiopathic Epilepsy. By J. W. Wherry, M. D., Clarinda, Iowa.

Peripheral Neuritis, a Clinicotherapeutic Resume. By William Broadus Pritchard, M. D., New York.

Some Suggestive Hints of the Morphine Habit. By William Lee Howard, M. D., Baltimore, Md.

Astereognosis, with Report of a Case. By W. F. Becker, M. D., Milwaukee, Wis.

Abdominal Relaxation, a Probable Factor in the Patho-

genesis of Gall Stones. By Jesse S. Myer, A. B., M. D.,
St. Louis, Mo.

Aids to Cystoscopic Practice. By Ferd. C. Valentine,
M. D., New York.

What is Epilepsy? By J. W. Wherry, M. D., Clar-
inda, Iowa.

Neurologic Progress and Prospect. F. W. Langdon, M. D.

Read the Medical Press Notices of the Neurological
Practice of Medicine, by Chas. H. Hughes, M. D., in the
advertising pages.

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FORENSIC ASPECT OF DOUBLE SUICIDE.*

By JAS. G. KIERNAN, M. D.,

CHICAGO.

SUICIDE, an expression of mal-adjustment to environment, hence relatively a sociologic test of race advance retains to the average mind that fetichic dread of the dead which requires coffins to be lifted over the threshold lest the dead return, which boycotts restaurants where dead victims of an accident have been carried, and which resents dissection lest the dead punish the living therefor, is emphatically evinced toward suicide. Burial of suicides at four cross roads with a stake through the heart, a psychologically sound deterrent,† originally arose to prevent return of the suicide for malign purposes. At a comparatively late date only did this fetichic dread crystalize into legislation. Even then it had to be aided by the alleged value of the citizen to the state, which made suicide a source of state and priestly revenue. In the Roman law, from state bias, this view early obtained. By it the suicide forfeited property. In the tenth century this Roman law, in canon law form, was injected by legislation and resultant judge made law,

*Read before the Chicago Academy of Medicine. February 25th, 1904.

†Kiernan, Medical Standard, September, 1892

into English common law. Owing probably to bias in favor of suicide it, was not until the 13th century the French enacted the like law. Like the Roman law these statutes exempted from the penalty those driven to the act by ill health or madness.* The King, an evolution from the temporary war lord, soon became the state.† Many offences were thereupon created with the common law compensation idea and the Roman law penal view mingled. Compensation was due the King, as representative of the state, for the subject destroyed by criminals as for treason. When legislatures struggled against kingly usurpations, Kings found revenue in forfeitures of this type. For this purpose George III, the meanest degenerate that ever sat on the throne of England, made more offences capital than were during all previous reigns. The judges appointed by the late Norman Kings, assuming, as judges still illegally do, legislative powers, injected Roman law into the common law under pretense of deciding what law was. In Henry III's reign even the suicide's free-hold had become forfeit. The humane law limitations as to ill health or insanity was ignored as a "dodge" to excuse crime. Popular respect for justice soon flung the free-hold forfeiture into disuse.

As this legal status of suicide obtained in England until 1870, when all forfeitures were abolished, many American jurists held that the common law of England and English statutes in force in 1606 still obtain. This view ignores completely changes made in English law by the Petition of Right of 1640 and the Bill of Rights of 1689, on which Jefferson based the Declaration of Independence, and on which the Constitution of the United States was modeled. By these, rights of the individual citizen were freed from Roman and canon law tyranny.

A sense of injustice to the surviving family of the free-hold's forfeiture led coroner's juries to return verdicts of death in a state of mental aberration, and juries and judges to test suicide by technicalities.

Shakespeare, with a deep literary sense of the value of

*Strahan : Suicide and Insanity.

†Letourneau : Evolution of Property.

topical allusion, with keen insight into the need of relieving pathos by humor, cites his favorite law book* in depicting Ophelia's death. Ophelia, strictly speaking, was not a suicide, even at the last, when she had fallen into the weeping brook, she had no appreciation of her danger.†

Her clothes spread wide
And mermaid-like, awhile they bore her up,
Which time she chanted snatches of old tunes
As one incapable of her own distress.

Utterly lost except to the insane train of ideas, she is as insensible to danger as a somnambulist and singing her life away, she passes from the melody of madness to the silence of the grave. Here, as so often an insane abstraction in delusions, or a train of ideas leads to accidental death which the populace, like Shakespeare's grave-digging clowns, calls a suicide:

First Clown: Is she to be buried in Christian burial that wilfully seeks her own salvation?

Second Clown: I tell thee she is, and, therefore, make her grave straight; the crowner hath set on her and finds it Christian burial.

First Clown: How can that be unless she drown herself in her own defence?

Second Clown: Why 't is found so.

First Clown: It must be "se offendendo," it cannot be else. For here lies the point: If I drown myself wittingly, it argues an act, and an act hath three branches; it is to act, to do and to perform; argal she drowned herself wittingly.

Second Clown: Nay, but here you, goodman delver, —

First Clown: Give me leave. Here lies water, good; here stands the man, good. If the man go to this water and drown himself, it is will he, nill he, he goes— mark you that; but, if the water come to him, and drown him, he drowns not himself. Argal, he that is not guilty of his own death shortens not his own life.

First Clown: But, is this law?

Second Clown: Ah, marry, is 't; crowner's quest law.

This crowner's quest law was actually enunciated by judges in the case of Sir James Hale, who drowned himself by going beyond low tide, and whose widow had ap-

*Bucknill: *Mad Folk of Shakespeare.*

†Plowden's *Commentaries.*

pealed against the forfeiture of a lease by the alleged suicide.

The view that English laws, unrepealed after 1606, were enforced in the United States, had a ludicrous outcome in Pennsylvania. In 1882, a German named Weiss, was prosecuted at Erie, for criminally libelling a fussy law and order humbug by caricature. The prosecuting attorney produced a statute of Edward I, permitting the commonwealth to stand aside any juryman objectionable to it. This practically packed the jury in favor of the prosecution. The judge, under the 1606 notion, decided it was good law. Whereupon, Weiss[†] demanded the wager of battle unrepealed in England until 1819, and the jury laughingly acquitted him. As to the forfeiture statute, it was not repealed until 1870, and the burial at the cross roads not until 1823. Both laws, under the 1606 notion, are still in force in Illinois.

The existence of statutes in New York, Missouri and other states, significantly indicates that the English law of suicide does not obtain in the United States. Under the English law if two persons agree to commit double suicide, and one succeeds, the other is held guilty of murder. Blackstone even claimed that the survivor must be considered an accessory before the fact.* The illogicality of this position is evident in the requirement of the law that the principal must be tried before the accessory. He who aids or abets the successful suicide is necessarily under this view guilty of murder. Furthermore,[‡] if a person lose his life trying to save a would-be suicide, the latter is guilty of murder. This view far from represents the law as administered in England. Very recently, as Strahan remarks, a highly respected English literary man, suffering from an incurable disease, shot himself in the presence of his devoted wife. She was asked at the inquest if she could not have prevented the deed; she stated she could, but would have considered herself a cowardly brute had she done so. No one dreamed of indicting her for murder although the law so required.

*Stephens' Commentaries.

The issue of double suicide involves the attempts so frequently made to induce the suicidal insane to kill themselves for the purpose of obtaining property by humoring an impulse or a delusion. Not rarely has it happened that people have been taken from insane hospitals for such purposes. Among the questions involved in the forensic issue of double suicide is therefore that of the influence of the participants on each other. The survivor is the most easily influenced either naturally or from state precedent to the suicide is not the principal. The mental state of deceased and survivor therefore must be ascertained to determine which was principal, which accessory; undue influence would hence acquit or condemn according to the party affected. The issue of manslaughter by criminal carelessness is moreover involved. Were suicide a crime in itself under the common law the ordinary principles governing a conspiracy to perform an illegal act would obtain.

I was about two years ago called as an expert by the firm of O'Donnell & Brady in a case where these issues were raised. The chief issue as to which I testified was that as to the value of confessions made while the confessor was being shaken out of morphine and illuminating gas stupor, and the issue as to undue influence where one person was drunk and the other calm and collected. All these issues as well as those whether judges had the right to separate criminating from favorable parts of confessions, and whether evidence of previous chastity was admissible in settling the question of seduction as bearing on undue influence where such an issue was raised incidentally by an assignation ending in an attempt at double suicide, were all decided by the Illinois Supreme Court in the case of *Burnett vs. People*.*

A twenty-eight-year-old dentist residing in Chicago had formed a liaison with a married tri-para living with her husband some blocks away. The husband of the deceased had been promoted to a higher place in his native state. His wife who had been so greatly nagged by the husband's family as to alienate her from her husband and his family,

*Illinois Reports. 192.

dreaded a return and dreaded leaving the dentist for whom she had formed a violent attachment. When she was apprised of the change of residence suicidal ideas at once entered her mind. Wednesday evening previous to her death when first she learned of the proposed change she sought the defendant, went to a saloon and drank, and spent the night at a hotel with him. During that night she constantly talked about suicide, stating that she had sufficient chloral to accomplish it. The defendant advised her against this course, pointing out its absurdity. The following Saturday, the night of the alleged crime, the defendant met her about 6 p. m., from that time until about two o'clock Sunday morning they were in saloons drinking whisky heavily. During the evening the deceased continually talked about suicide, stating that she would not go back to her old home. She informed the defendant that she had determined to commit suicide, and had in her pocket-book two phials of morphine, and she solicited the defendant to commit joint suicide, which he refused to do. About two o'clock, a. m., on Sunday, at the Marlborough hotel, they secured a room together for the night. When they arrived the defendant was quite drunk but the deceased seemed to be cool and self-possessed. A short time after entering the room the defendant went across the street to a drug store and purchased 25 quarter grain morphine tablets which he brought to the room, opened and set upon the dresser; at this time there were two similar phials upon the same dresser. When he returned the deceased was in a night robe lying on the bed seemingly very happy. She requested paper and envelope, for which defendant rang. These were delivered to the deceased as she lay in bed in the presence of the maid who brought them. The deceased at once began writing on the paper. When defendant opened the phial of morphine purchased by himself it overturned and about half of its contents fell on the floor. He then undressed, retired and went to sleep without taking any morphine. When he awoke the next day the deceased was lying by his side dead. A note written by her was upon the dresser against the empty morphine bottles, which was as follows: "To

whom it may concern:—I did it because I loved him better than anything on earth, and he loved me, and we could not be separated. Good bye.—Charlotte.”

Discovering her death the defendant was horror stricken at the situation in which he found himself. Believing that life was ruined, he arose, took the morphine remaining of his purchase, attempted to cut his throat or puncture his neck with a hat pin, turned on the gas and lay down. The proprietress detecting the gas came to the door and was admitted by defendant. A physician and the police were called. Restoratives were given. About three hours later defendant was taken to the police station where certain statements were made.

The statements of the defendant are substantially the only evidence connecting him with the death of the deceased. These statements began when the physician arrived and were concluded (there being several of them) about 10 o'clock in the police station. The portions of the statements or admissions chiefly relied on for conviction were to the effect that he had agreed with the deceased to commit suicide if she did. No witness heard any of the conversation between the parties, or saw anything done by either calculated to produce the death of the deceased outside of the statements of the defendant, the only evidence was their being together in the place, the note found, the three empty morphine phials, and the testimony of the druggist that a man somewhat like the defendant purchased a phial of morphine during that night.

The first persons to see the defendant were the chambermaid and the landlady, who had no conversation with him and knew nothing about him outside of the fact that he was drunk when he came in the night before, and that the paper was called for and given to the deceased. The next was Dr. Carter (a witness for the people) who arrived there at 3:30 p. m. The defendant was then in a dazed or stupefied condition, with the pupils slightly contracted. Dr. Carter could not tell then whether the defendant was suffering from excess in alcohol or from morphine. Upon inquiry the defendant stated that he and the woman had taken a

room together there, and that rather than go south with her family she had taken the suicide route. The defendant called the physician's attention to the note which an hotel maid had found. Asked as to the cause of the death, the defendant pointed to the dresser where three empty morphine phials were, stating she had taken a quantity of morphine, that he awoke sometime during the afternoon, and then attempted to commit suicide, calling attention to the scratch on his neck made by the hat pin. He stated also that he had taken morphine and turned on the gas, and requested the witness to give him more morphine that he might finish his suicide. He said nothing about any agreement between him and the deceased to commit suicide. At the first visit the physician remained but a short time, returned in an hour to find the pupils contracted and the patient in a semi-comatose. The effect of morphine, according to Dr. Carter, was first mind exhilaration, and secondarily stupor, and finally death, unless checked. Dr. Carter administered an emetic to the patient, and tortured him to keep him awake. He directed the officer to use his club on the defendant's soles to keep him from relapsing into sleep. In morphine poison the primary effects of morphine, according to Dr. Carter, lasted about four hours, and the after effect several hours, the exact time not stated. When first he saw the defendant the latter was then tending towards stupor. When Dr. Carter first talked to the defendant, the latter was apparently rational, but any stimulant would give that impression at first; stimulus to the mind is the first effect of opium. In an hour Dr. Carter became satisfied that defendant's condition was due to morphine, and regarded him as not responsible for what he was saying.

Officer O'Brien, the next person to see defendant, arrived at the hotel about 4 o'clock, when the defendant was still lying in bed, opposite the body of the deceased, and was not yet dressed. O'Brien stayed until 6 o'clock and assisted in taking defendant to the station. The defendant pointed out to him while there the drug store where he got the morphine, and also said that he and the deceased agreed to commit suicide together before they came to the hotel that evening. The defendant told him he tried to

kill himself with his knife, which the officer took and it was introduced as evidence. To this officer nothing was said about the hat pin. The officer was directed by the physician to keep the defendant awake, put water on him, rubbing ice steadily up and down his back, pulled his ears, and did everything he could to keep him awake, and that the statements made by defendant were in answer to questions put by him.

Officer White who assisted O'Brien in taking the defendant to the station, arrived at the Marlborough about 5 o'clock, when Officer O'Brien was trying to put the defendant in his clothes. The defendant could not get up, could not handle himself, and they had to dress him. The defendant made no statement while White was there. They all tried to keep him awake, and it took a full hour to dress him.

When the defendant was taken to the police station, Officer Shaughnessy was directed to take the defendant's statement in writing, but the written statement was not offered in evidence. Sidney M. Weil, newspaper reporter, was present at the taking of the statement, and the officer, were witnesses at the trial. The defendant stated, according to them, that the deceased said she could not live in her old home, could not bear to leave the defendant, that she was going to commit suicide, and asked him to commit suicide with her. At first the defendant did not like the idea, but finally assented; that she told him that she had enough morphine for herself, but not enough for two, and that he went and got a bottle of morphine and came in and set it on the dresser. In this statement the defendant detailed the trip of the deceased and himself the night preceding the tragedy, and as much as he knew relative to it. According to Weil they were a full hour getting the testimony. The defendant was lying in bed when he and the officers went in to see him, and apparently asleep. They aroused him and told him that they desired to take his statement. It was necessary to shake him up to arouse him. They shook him several times during this conversation. Both Shaughnessy and Weil would shake him and ask him more questions, and then after getting

the thread of the story the defendant would doze off, his eyes would flutter. It would take a second or two to arouse him at each time. He was under a heavy drug of some kind. The defendant volunteered nothing himself, and it was all solicited from him by questions, and he only made statements as questions were asked him except in one or two instances. As to the condition of the defendant at that time, both Weil and Shaughnessy agree; Shaughnessy stating that the defendant had to be aroused every fifteen or twenty seconds, and he seemed to be dazed and stupefied.

Chas. F. Carpenter, who took a statement from the defendant about 10 o'clock at night in his cell, testifies that defendant was not asked by him the direct questions whether he did agree with deceased to commit suicide. Carpenter told defendant that the officers of the station were so reporting, and asked the defendant what about it, when the defendant said: "I suppose I said it. I was drunk, I suppose, I agreed, I suppose it was true." As to the condition of the defendant at the time, Carpenter states that when he began talking to the defendant the latter did not talk very freely, but seemed to be in a kind of stupor; he was all humped up in a chair and did not seem to pay any attention to surroundings. Carpenter put the questions to him and he would answer yes or no, but did not go ahead and tell the story. He would affirm or deny a story. He never contradicted Carpenter in any of them, he seemed to assent to whatever Carpenter said.

There is no evidence either by the admission of the defendant or any witness, that the deceased took any morphine in the presence of the defendant, or that he gave her any, or requested her to take any, or bought any for her. The evidence rather tends, remarks Judge Ricker, (who delivered the opinion) to show that while the defendant was going to the drug store to get morphine that he purchased, the deceased took that which she had. In one of the alleged confessions or admissions the defendant said: "I drank considerable, and she had worked me up to such a state that I agreed to do anything with her." The defendant testified in his own behalf, and denied explicitly that he had ever stated

to the deceased that he would kill himself if she did. On the contrary he urged and counseled her against suicide. She insisted on suicide, and had sufficient morphine in her pocket-book to accomplish that end, and stated that she would never return to the south.

He denied that he saw her take any morphine or advised her to take any, and had no recollection whatever of being at the police station, or making any statement, or confessions, or admissions that were offered in evidence against him, but did admit that he bought the morphine, but was unable to state why he did it. He swore that he took none until after he had discovered that she was dead, and that not in pursuance of an agreement but because of his disgrace and humiliation.

The conviction of the defendant for murder in this case, remarks Judge Ricker, can be sustained only on the hypothesis that there was an agreement between him and the deceased to commit suicide together, and that agreement, in part at least, was the inducing cause of the deceased taking the poison that produced her death.

Upon the question whether under the circumstances suicide *per se* is a crime, there is, remarks Judge Ricker, a paucity of decisions. The general rule, according to Wharton, is: If two persons encourage each other to commit suicide jointly, and one succeeds and the other fails in the attempt upon himself, he is a principal in the murder of the other.

There are a number of English cases that hold if two persons mutually agree to commit suicide, and the means employed produce death upon one of the persons only, that the one surviving will be guilty of murder, but in all such cases the defendant was actually present and did some act furthering the commission of the suicide. Thus, in *Regina vs. Jessop**, Jessop handed the bottle of laudanum to the deceased with the intention that the deceased should drink therefrom a sufficient quantity to cause death.

In *Regina vs. Stormouth*† there was an agreement to

* 10 Criminal Law, Mag. 862.

† 2 B Div. 1, J. P. 729.

commit suicide between a man and a woman because of poverty. The agreement was mutual, and each purchased laudanum to carry out the agreement. The woman took the laudanum and died. The man took a portion but did not die, and left a note in the room where they both had been, stating that they had made such an agreement, and that the laudanum taken by the woman had produced death, but his had not proved fatal, so that other means must be resorted to. On the same day of the discovery of the death of the woman the man was arrested. In discussion the court said: If there was an agreement the prisoner was guilty in the law of murder, and the fact that that might have been only a pretended agreement of his part, or that he might have had some idea which changed his mind, made no difference in law.

In Illinois the question had not been brought before the Supreme Court. There are few cases decided by other State Supreme Courts. In *Blackburn vs. Ohio*,* *Blackburn* and a woman named *Lovell*, mutually agreed to commit suicide. The defendant mixed strychnine with wine and in pursuance of the agreement the woman drank the mixture. There was some evidence tending to show that the defendant by threats forced the woman to take the poison. The defendant was found guilty and appealed, contending that as suicide was not punishable there could be no conviction as an accessory. To this contention the court said: "Purposely and maliciously to kill a human being by administering to him or her poison is declared by the law to be murder, irrespective of the wishes or the condition of the party to whom the poison is administered, or the manner in which, or the means by which, it is administered. The fact that the guilty party intends also to take his own life, and that the administration of the poison is in pursuance of an agreement that both will commit suicide does not in a legal sense vary the case. If the prisoner furnished the poison to the deceased for the purpose and with the intent that she should with it commit suicide, and she accordingly took and used it for that purpose, or if he did

* 23 Ohio St., 146.

not furnish the poison but was present at the taking thereof—the deceased participating by persuasion, force, threats or otherwise in the taking thereof, or the introduction of it into the stomach or body, then, in either of the cases supposed, he administered the poison to her within the meaning of the statute. Her act of taking and swallowing it in his presence and by his direction was his act of administering it. It is said by council that suicide is no crime by the laws of Ohio, and that, therefore, there can be no accessories or principals in the second degree in suicide. This is true, but the real criminal act charged here is not suicide but the administering of poison, and to this criminal act there may be accessories and principals in the second degree. If I furnish poison to a guilty agent, an accomplice, to be administered by him, and he administers it accordingly, I am accessory before the fact, and if I stand by and council or encourage him in the act of administering the poison to another I am a principal in the second degree. But no question of this kind arises in the present case either upon the indictment or in the evidence. There is no claim or pretense that there was any guilty third person participating in the transaction. The charge is that the prisoner as principal in the first degree is guilty of administering poison, and thereby causing death. We think, therefore, that the court did not err in its instructions as to what amounted to the administering of poison within the meaning of the Crimes Act."

In *Commonwealth vs. Bowen*,* Jewett was imprisoned under sentence of death, and the defendant Bowen having an opportunity to talk with him advised him to commit suicide, and procured and brought to him a rope for the purpose with which Jewett did hang himself. The defendant was indicted for murder, there being two counts. The first count charged that the defendant "did counsel, hire and persuade, and procure said Jewett to kill himself." The second count charged directly that Bowen murdered Jewett by hanging. This seems to be the first and leading reported case in any of the states upon this question. Upon appeal the court said: "You have heard

* 13 Mass., 356.

it said, gentlemen, that admitting the facts alleged in the indictment, still, they do not amount to murder, for Jewett himself was the immediate cause and perpetrator of the act which terminated in his own destruction. The act of Bowen was innocent. Self-destruction is doubtless a crime of awful turpitude. In this offense the very commission of the crime which the law would otherwise punish with the utmost vigor puts the offender beyond the reach of its infliction, and in this he is distinguished from other murderers. But his punishment is as severe as the nature of the case will admit. His body is buried in infamy, and in England his property is forfeited to the king. Now, if the murder of one's self is felony, the accessory is equally guilty as if he had aided and abetted in the murder of A by B. If a man murders himself, and one stands by aiding in and abetting the death he is as guilty as if he had conducted himself in the same manner where A murders B, and if one becomes the procuring cause of death, though absent, he is accessory.

The only other reported case is that of the Commonwealth vs. Mink. In that case the defendant was engaged to be married to one Charles Ricker, who expressed his intention of breaking the engagement, which so exasperated the defendant that she determined to take her own life, and seizing a revolver made an attempt to shoot herself. Ricker, being present, seized her and attempted to prevent her carrying out her purpose, and in the struggle the pistol was accidentally discharged, fatally wounding Ricker. The defendant was indicted and convicted of manslaughter. The court held that suicide was a criminal act, and followed the principle that if one attempt to commit a criminal act and thereby commits homicide, although no homicide was intended, the crime will be manslaughter. It was also held that in that state suicide was not technically a felony, and the conviction was sustained.

The Illinois court was not disposed to go to the extent of holding, as in the Bowen case, that suicide or self-destruction is a felony, but took the view that the later pronouncement of the Massachusetts court in the Mink case,

*133 Mass.t 429.

and of the Ohio court in the Blackburn case, more nearly announced the correct rule. By the English common law suicide was a felony, and the punishment for him who committed it was interment in the highway with a stake driven through the body and the forfeiture of his lands, goods and chattels to the king. The courts adopt the English common law and the acts of the British parliament in aid thereof as it existed up to the fourth year of James I, which was the year 1606, so far as the same is applicable to American conditions and institutions and of a general nature, but as Illinois has never had a forfeiture of goods or seen fit to define what character of burial American citizens shall enjoy, the court has never regarded the English law as to suicide as applicable to the spirit of American institutions. In the view the Illinois Supreme Court entertains of the case at bar the charge against the plaintiff in error in both counts in the indictment is murder. In the first count he is charged with murdering deceased by administering poison, and in the second count with murdering by hiring, persuading and procuring deceased to take poison. Proof of either one of these charges in the court's opinion warrants conviction of murder. The court has held that an accessory before and at the fact could be indicted as a principal, and in two cases where the question was directly presented the court held that it was improper to indict an accessory simply as such was done at common law, but that he must be indicted as principal. As to the crime of murder the court has applied the rule that he who acts by another acts by himself, and that the acts of a principal are the acts of an accessory, so that the latter may be charged with having done the acts himself, and may be indicted and punished accordingly. If a lunatic or an idiot at the instigation or direction of another person should commit homicide none would question but that the instigator and director in such cases would be guilty of murder although the principal could not be punished at all. If by a virtue or deceit or persuasion A induces B to kill himself, this is as much the act of A as though A had induced C to kill B. The charge in the second count of the indictment is that the defendant did

hire, persuade and procure the deceased to kill herself, and if he did either of these, and as a result thereof deceased did kill herself it was the act of the defendant, and the court has no hesitancy in pronouncing it murder if the element of malice is found.

Counsel for the defendant have ably and elaborately discussed the proposition that the second count is merely a charge against the defendant as an accessory and that in order that there shall be an accessory there must be a principal, and as under Illinois law suicide is not a crime, the act of the deceased in killing herself was not a criminal act and there was no crime committed. But when the principle above announced is applied then the act of the principal, when done pursuant to the will and direction of the alleged accessory is the act of an accessory. Then it becomes immaterial what was the character of the crime committed by the principal, or whether there was any crime, and in such cases as this where it is not shown or claimed that the accused directly administered the poison of which the deceased died but that the taking of it was by his procurement, strict proof of this latter fact should be required. Though the defendant may have known that the deceased intended to kill herself, and may have assented to it, or may have even wished that she should do so, still unless the evidence shows beyond a reasonable doubt that he did or said something which aided, encouraged or induced deceased to kill herself he cannot be held guilty of the charge of murder. The evidence that the defendant did say anything that might by any possibility had been an inducement to the deceased to kill herself rested wholly upon his alleged admissions. Those admissions were made under such circumstances and when the plaintiff in error was in such condition physically and mentally as should have required the court to have made proper investigation before they were admitted at all, and if admitted, to have instructed the jury as to the character and weight to be given to admissions and confessions made under the conditions here shown. This was especially so in view of the instructions of the court as to the substance of the crime. By the thirteenth

instruction the jury were told that suicide was self-murder, and while this instruction is not complained of, and probably as modified by what follows it would not be reversible error even if objection had been made to it, still the effect of it was to declare that felonious which is not a felonious act under the Illinois law. The jury was also told that the plaintiff in error was permitted to testify in his own behalf and the true test stated as to his creditability and attached to that instruction was the charge that if the accused had wilfully and corruptly testified falsely to any fact material to the issue the jury could entirely disregard his evidence except in so far as it was corroborated. There was no possible contradiction of the evidence of the defendant upon the material things testified to except that growing out of his alleged admissions. There was not a single witness put upon the stand by the state to prove a substantial fact in the case outside of the *corpus delicti*, and in fact the whole case for both sides practically rested upon the testimony of the plaintiff in error, and on his alleged statements to the police authorities.

The defendant offered three instructions relating to the alleged admissions which were refused by Judge Baker. The first told the jury that confessions of a person out of the court at best are a doubtful species of evidence, and should be acted upon by the jury with great caution unless supported by other corroborative evidence. The other two instructions were as follows: The court instructs the jury that where a confession of the prisoner charged with crime is offered in evidence the whole of the confession so offered and testified to must be taken together as well as that part which makes in favor of the accused as that part which makes against him, and if the part of the statement which is in favor of the defendant is not disproved by other testimony in the case, and is not improbable or untrue, considered in connection with all the other testimony of the case, then that part of the statement is entitled to as much consideration from the jury as the parts which make against the defendant.

The court instructs the jury that if they believe from the

evidence in this case that the defendant at the time he made the confession which had been given in evidence was in a dazed and stupefied condition from the joint effect of intoxicating drink, morphine, and the inhaling of illuminating gas, or from the effect of any one or any two of these agencies, and if the jury further believe from the evidence that the confession was elicited from the defendant by questions while he was in such condition, then such confession is entitled to very little weight, and the jury would not be justified in convicting the defendant upon said confession unless they find it is corroborated by other testimony in the case.

No instruction was given with reference to the weight or character of the testimony such as is referred to the instructions and was the main reliance for conviction. The fifth instruction is defective, and we could not say it was not reversible error to refuse it for that reason. But no objection can be raised as to the fourth, and as all the alleged admissions of the defendant in error that were offered in evidence were mere verbal admissions, none of them rising to the dignity of a confession between which and admissions there is a well recognized distinction in the law, and as the admissions were drawn from the defendant by questions when in a condition that his mental status was doubtful, the jury should have been told by some instruction that they should be received with caution.* The refusal to give the fourth instruction was manifest error.

Some fifteen witnesses were over the objection of the defendant allowed to testify as to the general reputation of the deceased in the community in which she lived for chastity. That question was not an issue in the case.† Her chastity had not been attacked except in so far as the nature of it appeared from her relation with the plaintiff in error, and the opening remark by the counsel for plaintiff in error. This evidence covered the life of the deceased for several years back. There was nothing in the record justifying any such evidence as this. The witnesses all declared

**Marzen v. People*, 173, 111, 43; *Ackerson v. People*, 124, id. 563; *Jones v. State*, 39 Tex. App. 20; *Conner v. State*, 34 Tex., 659; *Commonwealth v. Howe*, 9 Gray, 110.

† 5 Am. & Eng. Ency. of Law, 2nd p., 872; *Common v. People*, 141, 111, 270; 3 Greenleaf on Evidence, 15th par., 27.

her general reputation for chastity to be good. The plaintiff in error stood charged with her murder as the result of a liaison between them, and none can doubt but that the testimony thus admitted was calculated to, and did prejudice the jury against the defendant. By it the natural inference arising in the minds of the jury was that the deceased was a good and virtuous woman who had been despoiled by the defendant, and because of an affection produced by his effort they had mutually agreed to commit suicide sooner than part.

The only evidence as to their relations came from the admissions of the defendant. Upon these matters it was not only wholly uncontradicted, but every part of it as made to the various witnesses was harmonious with every other part. All tended to show that the deceased sought defendant, telephoned him at his office, would go to his office in guise of a patient, would go to the drugstore under his place of business and send for him, and in a general way seek him out that she might be in his company. This was uncontradicted, yet the jury might feel warranted from the character evidence in finding that the deceased was a woman of good character and chaste life when considering the precautionary instruction as to the weight that was to be given to the testimony of defendant and their right to wholly disregard it if they believed he wilfully swore falsely upon any material matter, and in concluding that her general reputation should weigh more in their estimation than his testimony as to the circumstance which brought and kept them together, and the probable influence defendant had in producing her death. The case was reversed and remanded. The decision settles the legal status of joint suicide in Illinois.

OUTLINES OF PSYCHIATRY IN CLINICAL LECTURES.*

BY DR. C. WERNICKE,

Professor in Breslau.†

LECTURE TWENTY-NINE.

Acute expansive autopsychosis from autochthonic ideas. Disappearance of thoughts as elementary symptom. Neuroses from imperative ideas.

Hearing the thoughts as foundation of an ascending form of acute autopsychosis.

THE magistrate's clerk A., 38 years old, whom we will examine today, has been very hard to get to come to the auditorium, but has finally consented, as he says, to do science a favor. You see a robust, apparently healthy man of the best deportment and evident intelligence in facial expression and manner of speech. The general education he soon betrays, unusual in his position, is explained by the fact, that he has studied philology and shortly before his State examination had taken up another career, owing to impaired health. A formal thought disturbance in him is out of the question. He feels well. The necessity of keeping him here at the Clinic, in spite of his opposition, is due to the fact, that we must fear he will, as soon as he is at liberty, go to Berlin and look up the Emperor, for he considers it his duty and his mission to relieve the Emperor of a part of his executive duties. Consequently he considers it wrong and an act of false imprisonment that he is kept

*Continued from *Alienist and Neurologist*, Vol. xxv. No. 1.

†English by Dr. W. Alfred McCorn, Supt. Elizabeth General Hospital, Elizabeth, N. J.

here. But how discreetly and deliberately he nevertheless judges, you may perceive from the fact, that he offers no *mala fides* to our attitude, but only with the most scrupulous care not to offend, presumes we are in error. I called his attention to the fact, that when he came to the Clinic three months ago, he did so voluntarily and had felt ill, hence, as we hear, the purpose and destination of the institution was well known to him. He must admit the fact, but now regrets having done it, for he has certainly been deceived. Formerly he was ill, namely nervous, but now he is as well, strong and in every way as capable as ever. On inquiry we hear that he feels perfectly happy, except the restriction of his freedom, and does not doubt but that the physicians will gradually perceive their error. I must state that his general condition has been excellent during the last few weeks. His weight has increased since his admission from 63 to 78 kg. The patient does not doubt that the Emperor will receive him with open arms. How does he know that? An inner voice told him. The patient compares this inner voice, as we see from something he has written, to the oracle of Socrates, "who now has been declared to be crazy," as the patient incidentally remarks. We learn of the further attributes of this voice, that it is not localized, has no definite timbre, but occasionally consists of definite words and—what is the principal affair—depends on divine inspiration. Patient also entertains the fear that we physicians incur a severe divine punishment by our blindness. He does not doubt, and this is shown by what he has written, that he is in direct communication with God; receives revelations and inspirations from Him. Hearing voices, like other insane, he denies, equally as little has he had visual manifestations. I reply that if he is wronged here, this does not preclude the special care of God. He says it is very possible that the thought of letting himself be admitted here had been given him by an evil spirit. He can only regard the time here as a probation period imposed on him, he nods in assent when I remind him of the analogy with other heroes or prophets. As you have heard, he has no grudge against the physicians, but is convinced that we

believe we do our duty, but he emphasizes the difference between his spiritualistic conception of the world and our materialistic, which must naturally exclude the belief in God and spirits. The patient is strengthened in his conception of the world by an event in his childhood, when one night he was awakened, when his grandfather was seriously ill, and saw a gray clad woman disappear through a half open door. His mother had seen the same apparition and could confirm it, and just about this time his grandfather died. He only smiles at the psychological explanation we attempt for such ordinary sense perversions when half awake. Patient besides has great plans for the future, as we learn from what he has written and says. He will, as soon as he gets in power, make all the world happy, appoint the Superintendent body physician at a salary of 30,000 marks, construct a gold bridge over the Rhine in the vicinity of the Niederwald monument, as a symbol of eternal peace—the gold indicates the purity of the sentiment—and take the money for it from the Julius tower. He certainly has a large number of absurd fancies he conceals from us.

The disease here involved, has appeared very acutely; on the day prior to admission the patient had performed his duties satisfactorily. We learned that the patient, whose father died in an insane hospital, had for years expressed the fear of becoming insane. A brief attack of intense nervous excitement had occurred seventeen years ago and was the reason that he shortly before the examination had given up his philological studies as too hard. But the patient was well constituted mentally. When he sought admission to the Clinic, he was excited by the occurrence of grandiose ideas, which he considered pathological, and begged assistance that he did not become insane. His face was markedly congested, the skin of the whole body slightly cyanotic, pulse frequent, 120; small and soft and not perfectly regular, subjective complaint of palpitation, a dilatation of the right ventricle to a finger's breadth beyond the right border of the sternum objectively demonstrable. The examination of the nervous system revealed no pathological condition only in the enunciation of hard words, the speech

was somewhat stumbling and mixed up, something the patient noticed himself, but has never been observed since. The feeling of illness was not constant, but so changeable that the patient soon declared he is the Emperor, desired to be addressed as William, and in the reception room wrote on a slip of paper the words: "Arrest. William." During the course of the day he repeatedly asked for his discharge, for he was not ill. Toward evening he definitely expressed his grandiose ideas. He spent a sleepless night in spite of three grams of potassium bromide. The following day the patient had perfect insight and only occasionally complained that these absurd thoughts were obtruded upon him. The nights became better and the palpitation ceased. On the fifth day toward evening the patient was again restless for a short time and demanded his discharge to go to Berlin, but soon expressed himself as very unhappy, that the pathological ideas had returned. At the same time increase in the cyanosis, the pulse frequency (to 130) and palpitation had occurred. On the next day improvement again, the pulse went down to 88. Still the least exertion causes palpitation and cyanosis. Digitalis, continuance in bed, regulation of sleep by paraldehyde and trional had a favorable effect and the patient's condition became so good that his discharge was considered. Weight had increased about 6 kg. Six weeks after admission toward evening a relapse suddenly occurred, attended by anxious facial expression and the complaint: "The ideas come again," and after a few moments the intention of going to the Emperor in Berlin, and extreme desire to be discharged. Also irritable, anxious manner, perceptible discomfort, occasional grasping at the heart, complaints of palpitation, pulse 128, congested face, general cyanosis. The derangements of the general condition have disappeared after a few days, but the grandiose ideas remain and seem to gradually become of larger scope. At the time the patient thinks he may be pleased with the abundance of his thoughts, that occasionally he could not sleep, proves to him the "activity of his mind," he boasts of the possession of his complete self-control. In the week of the relapse patient lost about $\frac{1}{2}$

kg., but since then has gradually regained it and taken on an additional kilogram.*

Those of you who have been with me before, will remember a very similar case I presented a year and a half ago. It was the affair of a young mechanic of 22, by the name of Sch., who had been discharged recovered after four months treatment. This patient had come to the Clinic of his own accord, because he felt he was insane. In his opinion he had been sick about ten weeks, and thus agreed with his relatives' statements. At the time of admission he complained of headache, of a feeling in the head as if drunk, and of palpitation, which occurred in paroxysms, besides of stupidity and inability to think: "he felt so stupid." The congested face, suffused conjunctiva and a slight cyanosis were objectively conspicuous, the latter increased by walking about the room. Pulse not accelerated, heart normal. Patient was evidently in a remission of his disease and at the time presented no psychotic symptoms, except an increased desire to sleep, but he described with great precision the symptoms of his past illness and this was my reason for presenting him. Fourteen days after a state of excitement occurred, which, as the patient subsequently stated on return of his correct judgment, was a repetition of his former condition, only of much less intensity, caused a few sleepless nights and entirely disappeared about the eighth day. This second exacerbation was combined with marked vasomotor disorders, congested face, cyanosis of extremities, increased perspiration and pulse frequency. From then complete disease insight quickly appeared, so that the patient could be discharged in three months, and until now, fifteen months later, has remained well and has his former position. We learned from the patient that his first attack, lasting about ten weeks, began with poor sleep and irritability. A feeling of anxiety in the cardiac region then appeared, which continued two days and caused an anxious restlessness, "as though he should throw himself into the Oder." After a few days—about four—this feeling was replaced by another, "the opposite of the former," such a happy feel-

*Patient had been discharged recovered and with normal heart boundaries.

ing, "as though the Holy Ghost was in him," located at the same place as the former feeling of anxiety. A more definite description of this feeling was hard for the patient, he first characterized it a bubbling in the breast, then as uncommonly easy and free respiration. "Strange thoughts" came to him and he noticed that he had become someone else, as he presumed, inspired by the Holy Ghost. He noticed special faculties in himself, believed he had discovered perpetual motion, to have the ability to at once distinguish "noble and mean persons," believed he could influence people like a hypnotizer, that they did what he wished; conceived the plan to change his principal's business into a corporation. Still he perceived he got on badly with his work and did not have his mind on it; that those about him made fun of him, called his plans nonsense or said they did not understand them. For three weeks it was only strange thoughts he noticed, then he heard them uttered by a fine feminine voice, which was located there, then the bubbling in the chest reappeared. The consciousness of being inspired by the Holy Ghost now became more evident to him. The voice told him what position the people took with reference to his plans, whether *e. g.*, they would join his company or not. At night the voice often spoke to him constantly and disturbed his sleep. Once he heard three voices simultaneously from his chest say "good night," two heavy besides the fine one, then he became tired and went to sleep. An unusual number of thoughts came to him, the words appeared "involuntarily," and it was as though the Holy Ghost spoke from him, he preached for hours; once spoke in verse and finally, a few days before admission he left home to have himself consecrated by the resident priest as court chaplain. By diligent Bible reading he had in the meantime become convinced that he was one of the two witnesses spoken of in the Revelations of St. John. The patient had told us all this at the clinical presentation a few days after his admission with perfect insight into the pathological nature of the events described. The second brief attack was accompanied by anxiety and apprehensive ideas, the anxiety was again located in the heart, the apprehen-

sive ideas somewhat of the content that he could never get out of here, would die here, his body be used for anatomy, etc. He impetuously demanded his discharge, but can be quieted and the next few days presented only a haughty, pretentious manner; tried to instruct the physician, but remained accessible to consolation. He composed a guide for the physician to examine the insane, spoke of his "great number of thoughts, his fearless courage," his ability to do great things. Still he retains a certain insight into the pathological nature of the numerous thoughts that came to him, if he did not consider the content pathological. Still in this respect the disease insight quickly returned, and now the complaint, that so many thoughts came to him, disappeared after a week. At the time of the greatest excitement a localized feeling of happiness again existed, but the patient did not hear a voice in this second attack. The fact is of importance that the patient has been brought up under orthodox religious views, as proven by letters of his parents and the circumstance, that his call to the ministry was recognized by them and violent opposition to his voluntary admission to the Clinic had been raised. We then learned later that the patient had always been somewhat peculiar, and that during his illness fanciful grandiose ideas of the content that he promises his colleagues millions, had been observed in him. His weight had increased from 56 to 65 kg. on his discharge.

The two patients you have now become acquainted with, have apparently in common, that the autochthonic ideas familiar to you, in acute origin, form the basis of their disease. All other symptoms may be regarded as sequela or attendant manifestations of this one cardinal symptom. Thus the phonemes, whose inner connection with the autochthonic ideas is especially plain in these cases, also the explanatory ideas dependent on the content. In remarkable contrast are the happy ideas observed in the first patient with the simultaneous, if mild affect of anxiety. The hypochondriacal feeling of happiness peculiar to the second case, has been mentioned before;* on the whole it is a very rare oc-

* See *Alienist and Neurologist*, Vol. xxi, p. 314.

currence. According to the whole simple complex, we will characterize the disease as an independent form of the autopsychoses, distinguished by the acute appearance of autochthonic ideas with marked implication of the vasomotor nervous system, by the course in brief exacerbations following each other rapidly, by the surprisingly favorable termination in several months. The independent significance of the autochthonic ideas is thus put in clear light. I might provisionally consider suitable the name *acute expansive autopsychosis from autochthonic ideas*.

Besides these two cases amply demonstrated, I know another which I might term abortive and not really include among the psychoses, because the elementary symptom of autochthonic ideas is isolated and does not lead to any fixed explanatory delusions. I have incidentally mentioned it before†. It is the case of a lady of 52, the wife of an army officer, who for years has had diarrhoea and was thus run down, always had various hypochondriacal complaints, especially during the last few months. A conspicuous impulse appeared quite spontaneously in her to communicate her ideas, in consequence of thoughts which "spoke" within her, but not expressly designated voices. "It may only be her own thoughts or suggestions." Sometimes indicated feeling of anxiety, the sleep much disturbed by the thoughts. Efforts for an explanatory delusion were joined to a personality the patient had recently become acquainted with and who was engaged in magnetic cures. Content of the possibility of influence by this person. By improving nutrition, rest in bed, attention to the sleep complete restitution within eight weeks.

While the autochthonic ideas not all too rarely constitute a special disease type, as just described, this is not the case with the opposite elementary system. I here touch upon a point which might have been mentioned in connection with the paranoiac states, for only the combined explanatory delusion is apparent. As the emergence of thoughts from pathological local irritation is usually referred to external effect, the momentary disappearance of the thoughts

† See note on page 8 of Vol. xxi of the *Alienist and Neurologist*.

may occur as a symptom and be similarly interpreted by the patients. The complaint of certain patients, the thoughts are "drawn out" of them, so often heard in the same hospital, usually seems to refer to this symptom. The further explanatory delusion that the medical regulations are to blame and the thoughts known to the physician, is often added. Certain information which excludes every doubt as to the significance of the symptom I have recently obtained.

We have previously been occupied with the supraquantivalent ideas; if we now regard the length of course to be decisive, we will often have to include these otherwise chronic cases among the acute autopsychoses.

Consequently this is the proper place to speak of the somewhat infrequent cases of *psychoses from imperative conceptions*. In no province would it be more difficult to separate the psychoses from the neuroses; for it would only be consequent to speak of an *imperative idea neurosis** to characterize just as well the degenerative etiology as the relation of the elementary symptom to the breadth of the psychical normal. The name imperative idea neurosis would be more suitable as the analogous name of apprehensive neuroses has become sufficiently current. In general we will have to advance the proposition that the imperative ideas, as soon as they are alone and not followed or accompanied by other psychotic symptoms, fall within the domain of the neuroses.† But for this criterion an exception must be expressly stated, namely, for the anxiety of mild degree, which is often added to the otherwise isolated imperative conceptions. A criterion reliable in most cases might be found further in the point of view often employed, in how far the patient's actions are influenced by these imperative ideas. The content and number of the imperative ideas exercise an unmistakable influence, so that in the individual case the boundary of the neurosis is overstepped. This seems to be the case most rarely, when in the great abundance and great diversity of the imperative conceptions, not so much

* See C. Westphal: Imperative Ideas. Arch. f. Psych. Bd. 8, p. 734.

† For these cases Westphal has proposed the name "Abortive paranola," but which cannot be recommended in any way.

the content of the thoughts as the impulse to think, is constantly felt to be annoying, cases which in general belong to the type of doubting insanity described by O. Berger.* If you recall the scheme given in the introduction of these lectures, you will be inclined to perceive the essence of doubting insanity in the emergence of terminal ideas in consequence of pathological irritation. The impulse, which impels to attain objective ideas, is placed by the patients in the actively arising terminal idea. The *maladie du doute avec delire de toucher*, described by the French might be only a special case of doubting insanity. Still I do not doubt, that, under certain circumstances, the state of general doubting insanity may be so annoying that it leads to psychotic actions, as *e. g.*, to suicide. More frequent in the domain of the psychoses are cases of a limited, monotonous, very affective content. This content is sometimes motor, in that the patients complain of the impulse to perform definite actions recognized by them to be absurd or wrong. An attending feeling of anxiety is then generally yielded to, that the action is performed. The most common here are the cases of incendiarism by young epileptics and of irresistible impulse to steal—kleptomania so-called—at the time of menstruation.

At our Clinic we have most frequently observed imperative ideas which were confined to the religious domain and led to micromania. I will now briefly sketch a typical example: A spinster of 43, well constituted, without hereditary taint, but always very pious, was admitted voluntarily August 31st, 1891, because she feared she would commit suicide. In 1881 she had been treated for "religious mania" for three months, had then attempted suicide, and was discharged completely recovered. She dates her present illness from the spring, especially bad, combined with insomnia and outbreaks of despair. She knows that she is insane, but has gone to the priest for consolation, still has been strengthened in her delusions by him. When she prays the worst blasphemy comes into her mind, she must curse God, Jesus Christ, the Virgin Mary; she applies the worst epithets to

* Archiv. für Psychiatrie, Bd. 6, p. 217

them, uses indecent expressions about them. She cannot refrain from these thoughts, they come against her will, but are her own thoughts! How bad she must be, that she, always pious heretofore, can have such thoughts! The priest said that to her. She knows she is insane, she has been to the dispensary doctor, who sent her here. The explanatory ideas that she is bad and eternally lost, are held to in spite of partial disease insight. The idea is added that she is to blame for her illness, in that she has lived too much alone, she should have arranged her whole life differently, she must not live any longer. Only from dread of the disgrace has she refrained from throwing herself into the water. The imperative ideas come in paroxysms and are combined with intense anxiety "inside"—in the heart. After the attacks the patient feels generally weak, especially in the legs, her feet and hands tremble. It is as though her eyes were clouded; patient feels incapable of reading or doing any work. Mood constantly dejected, a feeling of subjective incapacity. Admission to the institution has immediately resulted in essential improvement, the attacks are more rare and less violent, the disease insight has gained the mastery, and complete recovery with simultaneous gain in weight (of 4 kg.) until discharged on November 15th. An indication of delusions of autopsychical relativity is to be mentioned, in that the patient in the early part of her stay in the institution referred to herself in the way of self-accusation a newspaper item reporting a triple murder. Further frequent complaints of the head, roaring, the feeling that it would burst, etc. Objectively no disorder of the intellect, ability to attend, attention, etc. This patient was readmitted in 1898 in a relapse of much less intensity of the same nature, and could be discharged in a short time. I have seen a similar favorable course in a house maid of 20 with a hereditary taint; in her the feeling of misery, suicidal impulse, incapacity for work, in spite of existing disease insight, were so pronounced that only the insane asylum could be the patient's refuge. Attendant somatic troubles, like palpitation, headache, hypochondriacal sensations were not want-

ing. Onset quite sudden after a fright, constant blasphemy in praying, recovery within nine months. Years ago, when at supper, similar imperative ideas had appeared very temporarily.*

The remarkable manifestation that thoughts entirely free from affect in themselves become phonemes, by which the explanatory delusion: the thoughts are known to others, originates, may likewise be observed as cardinal constituent of a special ascending form of acute autopsychosis. As you will remember, we have reserved expressly for cases of this sort the term "*hearing the thoughts*," first employed by Cramer.† The patients first notice that what they read and write, later what they say also is repeated by voices. Consequently every design to do something is heard as a voice. The thus induced disturbance in thought is annoying and imperatively commands the attention. An attendant feeling of anxiety, located in the head, is expressly given as a sequela. Hypochondriacal sensations of a milder sort, like feeling of general weakness, headache, dyspnoea, paræsthesia of the limbs, in the mouth, abdomen, etc., are not utilized for delusion formation, but continue to produce the external picture of a dejected, melancholic depression. Two cases of the kind, a servant girl of 22 and a telegraph operator of 30, I remember, of acute onset and rapid development (within a year) to delusions of persecution and consecutive grandeur and extensively falsified content. Hearing the thoughts occurred in the one case paroxysmally, at first for hours, then for days. With the gradual habituation the depressive effects disappeared and the attention became freer. Only in the depressive phase of the disease is the elementary symptom isolated, later the voices become independent, not only of that, but also what the patients think and do is spoken and chiefly in hostile tone, so that the voices are ascribed to definite persecutors, later in an agreeable tone, so that for example the voices are interpreted as those of royalty. But all the persons actually about

* A case of acute psychosis from imperative ideas in case 27 of the *Krankenvorstellungen aus der psychiatrischen Klinik zu Breslau*, Heft 2.

† See note to pages 9 and 268 of Vol. xxi of the *Alienist and Neurologist*.

say or do is judged under the presumption that the thoughts are known to them, and so it results in the symptom of the delusion generalized autopsychical relativity and corresponding conceptions of the world. The allopsychical orientation then suffers also.

Hearing the thoughts, that the voices are expressly described as their own thoughts put into words, is thus sufficiently differentiated from the autochthonic ideas. But an inner relationship between the two elementary symptoms will have to be admitted and seems the most evident when you recall my remarks on the significance of the left temporal convolution* in my twentieth lecture. In this sense we will have to regard hearing the thoughts as a special form of functional disorder of the left temporal lobe. The relationship with imperative ideas is clinically manifested, in that in the one case at the time the voices had become independent, an impulse to repeat, and in interrogatory content of the voices, to answer them, was felt.

It almost seems as though hearing the thoughts in the restricted sense understood by us may have an especially severe and portentous significance. Also more complicated cases in which it occurs have been characterized by severe, rapidly progressive course.

In what has gone before I have essentially considered cases of especially cardinal or practical importance. But the province of the acute autopsychoses is far from exhausted; it seems rather to be especially prolific and to still embrace a large number of disease types readily differentiated. Thus you have become acquainted with a case of acute traumatic autopsychosis,† which presented besides marked autopsychical perplexity and disorientation, the autopsychical defect of a retroactive amnesia extending back to childhood. With respect to the perplexity and disorientation, it fully resembles the case of Miss v. F., described in the previous lecture; we have further seen‡ that in a chronic, residuary case a delusion system existed which could be traced almost exclusively to a delusion of general-

* See *Alienist and Neurologist*, Vol. xxiii, p.

† See case 22 of the "*Krankenvorstellungen*," Heft 1.

‡ See case 13, Id.

zed autopsychical relativity. All actions of those about seemed to the patient to refer to her thoughts or directed to them. She assumed that her thoughts are known to everyone, but had never heard them. It was rather autochthonic ideas, which might here be ascertained to be the source of a delusion of generalized autopsychical relativity.

In the following lectures we will become acquainted with still further special cases of acute autopsychoses.

LECTURE THIRTY.

Presentation of Two Opposite Types of Disease.—Digression as to the Will.

—Disease Type of Affective Melancholy.—Danger of Suicide.—

Fantastic Micromania.—Phonemes and Visions.—

Course, Frequency of the Disease.—

Diagnosis, Treatment, Prognosis.

Mrs. H.,* 43 years old, whom I present to-day, shows in manner and facial expression her greatly dejected mood. As she notices that I speak of her depression she bursts into tears. Asked as to the reason, she states she feels unhappy. Why unhappy? She can do nothing, is physically indisposed, and at best can only sleep. How is it with her thoughts? It is hard for her to think. With memory? This is also bad. To test her ability to attend, the patient is asked to pay attention to the word *antanarivo*, unfamiliar to her. It is thus shown that the conception of the strange word is harder and slower than normal, while the patient's answers otherwise are prompt. What does she have to do? She has to help in her parents' hotel, something that has not been hard for her. As soon as she became ill she could do nothing, not come to any decision, even getting up in the morning cost her an effort. All she had to do seemed terribly hard; she therefore worried about the coming day. Thoughts as to the future caused her anxiety and gave rise to the idea of taking her life. In what way? She would throw herself into the neighboring pond, but this was prevented by not being left alone. Whether the pa-

* See case 7 of the "Krankenvorstellungen," Heft 1.

tient has other anxiety? No, only from thoughts of the future. Where is the anxiety located? In the breast and head. To the inquiry what the word is that was given her, it is shown that she has forgotten it after a few minutes; she only remembers that it began with A. But she recognizes it again among a number of words pronounced. Whether the patient had any other reason for taking her life, any material trouble? No, she is well cared for by her relatives, but she has become perfectly indifferent to everything; how it fares with the parents and brothers and sisters, whether they visit her at the Clinic or not, even if there was war or the Emperor dead, she could not be affected by that. She can neither feel happy nor sad, her heart is turned to stone. In fact the patient who is constantly kept in bed takes no interest in what goes on about her, is indifferent to the visits of her relatives, never expresses a desire. Except caring for her person, the gratification of its requirements, making her bed and the like performances, which are done at certain times by all the patients in the ward, she shows no initiative and generally does not speak except in response to questions; then, as remarked, always very promptly if it is not a matter of hard requirements. Asked if she does not think of anything at all, patient replies that a tormenting thought occupies her constantly, namely, that she is so alone and neglected since her husband's death (a year ago).

Patient is fully orientated as to her position, she feels ill, has perfect confidence in the medical arrangements and came to the Clinic voluntarily to prevent suicide. She is favorably influenced by encouragement, but cannot overcome the doubt as to ever being well again. She is well physically; tolerably well nourished. But her appetite is very poor and only eats sufficiently when urged. Sleep is attained only by means of hypnotics in spite of the existing desire to sleep. Patient had attack of melancholia fifteen years ago from which she recovered; she was then one of the best attendants in the hospital X.; has been married six years and since the death of her husband, *i. e.*, a year ago, has been in the same morbid condition as she is today sev-

eral times. It usually lasts about four weeks; the intervals are of about the same length. The patient says of the times when well that she feels perfectly well, sleeps well, eats sufficiently and works with zest. The morbid state always appears quickly—in one or two days—and is announced by the suppression of the axillary perspiration, habitually profuse. The dryness of the axilla then continues for the whole time of the illness.

Of special interest for the conception of the pathological state is the result of the perimetric examination.* It reveals a concentric contraction of the visual field of both eyes, which in the horizontal meridian externally reaches 60°, internally 40°, and may be increased by fatigue experiments 8-10 degrees more.

The presentation of our second patient, Bertha Pr.,† saleslady, of 24, will be largely in form of a dialogue.

Patient entered the auditorium convulsed with laughter and greeted those present in a somewhat loud, imperious tone (imitating a lieutenant). "Good morning, gentlemen, good morning. Storch, good morning; good morning, Liepmann, how is the little woman? Ah, good morning, Professor, I am pleased to see you. How are you? Better every day? Is it not so? I am always a little funny, but there is no harm, is there? Why should I not be funny?" I: "Now be quiet for a little while and take a seat, I wish to say something to the gentlemen, then you can talk again." Patient seated herself in the most unconstrained manner, the legs stretched out, the face resting in the hands, turned toward the audience. "Indeed I will be perfectly quiet, now you talk, I will not say a word. Ah, what is that? (seeing the water pipes and basin). You have a beautiful closet here," (goes toward it) "ah, a basin, a fine basin and soap, and such a nice towel." "Please, will you be quiet?" "Yes, I am, but for shame, this dirty" (running the finger over the basin, shaking with disgust and then put the finger in her mouth). "Now sit down again. Are you still Bertha Przytek?" "Yes, indeed, we are acquainted for a long time, Professor.

* The visual field is found to be normal in the intervals.

† Admitted August 22d, 1897. See case 5 of the "Krankenvorstellungen," Heft 1.

Ah, what a fine coat you have, you are a handsome man, Professor." Catching me by the hand and placing herself with me for the *pas de deux*, as song and dance artists do, she sings in a loud harsh voice in the worst possible way:

Wir sind zwei Wunderkinder,
Wie so Kinder sind,
Das sieht sogar ein Blinder,
Und wäre er ganz blind.

Then in another corresponding theatrical position: "The wedding will be in a year." She then says with a comical languishing glance: "Finally alone." I: "Now be reasonable for once, Bertha, and let me say something." "Indeed I am always reasonable, that is my strong point! You, what? Now I am perfectly quiet." Nevertheless she continued to talk, taking up everything she sees and hears and using it in her stream of words. As she hears the word *hypermetamorphosis*, she says, *e. g.*: "Yes, Meta, who has given me too much morphine." Catching the word *Wesen*, she says: "I have been on the Weser." "How old are you?" "I am now exactly 16 years 2 minutes old." But how can that be?" Believe me, I am 16 years 2 minutes." "Where are you now?" In the insane asylum on Göppert street." "How are you treated?" "Oh, don't mention it." "Good or bad?" "Bad? Is no name for it." "Then you are not pleased here?" "I will go away, why should I be here among thieves, whores, pickpockets, murderers?" "Whores? How do you come to be among whores?" "How do you come to me, Professor?" "What are the gentlemen here for, Bertha?" "Too bad that they are old gentlemen, the other time they were handsome young men." "You once said you would be the daughter of the Empress. How is that?" "Oh, nonsense. I have never been an Empress, I am a Bofel." "Good bye, Bertha, you may go now." Nodding familiarly to everyone, she departs, laughing loudly, as she came: "Good bye, Liepmann, remember me to the little woman. Good bye, gentlemen."

The two patients presented are chiefly noted for their entirely opposite mental state and their equally contrary conduct

due to it. I will soon call attention to the fact that I consider them relatively pure examples of that change derived from our scheme, which I have termed intrapsychical afunction, or hypofunction, and intrapsychical hyperfunction, *i. e.*, as expression of pathologically blunted, and on the other hand, pathologically exaggerated activity of the intrapsychical paths. Still, the experience we have had previously that the derangements of the action of consciousness, which are to be derived from our schemes A Z m, always lead to changes in the content of consciousness, which belong largely to one of the three provinces of consciousness differentiated by us is confirmed here. We will find that the autopsychical orientation is damaged in both cases, and the intrapsychical afunction has accordingly resulted in micromania, the hyperfunction in delusions of grandeur. The momentary function of consciousness further includes that act, which constitutes the self-perception of the mental condition we are in. This fact has led Griesinger to speak of a "psychical tone" and to deduce the pathologically exalted mood from a facilitation of the movement occurring in the "psychical reflex arc," the depressed mood from its inhibition. But the changed mental states, as the fundamental deviation of the intrapsychical function are equally essential qualities of the personality or individuality, and therefore it cannot be strange that the active consciousness perceives this change in the personality and reacts to it. A disorder of autopsychical identification results in the meaning of my words at the beginning of lecture twenty-eight.* In transmission of the disorders of identification into the consciousness of the personality assumed in the psychosensory provinces, it would be a matter of a paræsthesia in the meaning of our scheme. As experience teaches that there are relatively numerous pure cases in which the totality of symptoms are to be derived from the assumed hypothetical states of intrapsychical afunction and hyperfunction, we therefore have the definition of two sharply differentiated forms of autopsychosis, which we will call *melancholia* and *mania*.

* See *Alienist and Neurologist*, Vol. xxlv. p .

We will first consider melancholia, for Mrs. H. furnishes us a good example.*

A brief detailed statement as to what we have to understand by the *will* from our standpoint, cannot be avoided here. To will a certain action presumes decision, *i. e.*, unquestionably a pure action of thought, which has for its content that two or more possibilities are weighed against each other. It is very natural under normal condition that the possibility easily gains the victory, which by habit and usage has attained the greater value, the decision is then normal by the normal valuation of ideas and trains of ideas. We cite a simple example; I awake in the morning and get up and dress, for which a decision is necessary. The two possibilities are to get up and to stay in bed; nothing is more natural than to get up promptly if it has been done all the life. But then getting up may depend on different things, *e. g.*, the time; a glance at the clock decides us to stay in bed. Or I have spent a restless night, I believe I have a fever and feel sick, and therefore decide to stay in bed. It is seen that the decision is then correct and rational when a large number of ideas which co-operative have their normal value, and that is abnormal when the force of these ideas is changed in consequence of a mental disease. Therefore the hypochondriacal patient does not get up, perhaps in consequence of abnormal physical sensations, which are due to the mental disease, he feels physically ill and too weak to arise.

If, as in this example, the two possibilities are weighed, either to do or not to do something, it would be thought that only the first case concludes an action, and that therefore the conditions for its occurrence are always harder than for the second case. That would in itself be correct, as we will soon see, but for the consciousness of the person awake, in a certain measure complete, is regarded decisive as to what value a certain idea has attained by usage, training and habit, and in comparison it is quite essential whether to

* If not perfectly pure, the blunting of the ability to attend and the concentric contraction of the visual field are additions which are not present in the great majority of cases and perhaps belong to the special, if not rare, recurrent form.

do or not to do forms the content of this idea. If we assume this long acquired possession of ideas of a certain value is lost or greatly lessened, a higher grade of dementia exists, *e. g.*, in a paretic this natural relation will have its full value, then from this simplest of all reasons the patient comes to the conclusion to stay in bed. But under certain circumstances not to do requires the greater effort of will; consider *e. g.* a certain mother who is accustomed to get up at a certain time to care for her child in case of severe physical illness, she will need all her self-control to obey the physician and omit the accustomed action.

We may now define as will that more or less complex idea which has proceeded from a resolution; again resolution may be defined as weighing (competition would be more correct) of two or more ideas or groups of ideas, of which one at least fulfills the condition that it has a motor content, then may form the starting point of motor processes. Freedom of the will presumes the freedom of determination, *i. e.*, the normal value of all ideas which have co-operated in the resolution. No violence is done to the use of language if the act of determination is included in the will, and may then be simply defined: Will is the result of the competition of different groups of ideas, of which one at least is a motor objective idea and has at its disposal the starting point of the centrifugal projection system. By this consideration it is comprehensible that the will represents in a certain measure an index of the intrapsychical function joined to the tract AZ of our scheme.

Of the resistance of this centrifugal tract Zm, of the expenditure of strength necessary to overcome these resistances our consciousness must have an approximate knowledge, for experience teaches that the resolution to do something is the harder as more difficult the task is. The new unknown always seems to us the hardest, yet not experiments, and then when the difficulty is only apparent and depends on a self-deception as to our ability. A firm will or an extreme effort of will, as it is expressed, is necessary for the inexperienced to jump on to the step in crossing a crevasse, even when the leap is perfectly easy and no real danger is

present. It may be similar with the pronunciation of a hard word in a foreign language in case the other example should seem too complicated; a very timid scholar at once gives up pronouncing the word and does not make an attempt.

Many actions mutually due to each other so cogently that one only begun forms the initial link of a whole chain of subsequent actions. Of the greater expenditure of force for so many, which is essential under these circumstances, our consciousness has knowledge, and therefore especially strong motives will be required to determine our will for such undertakings; contrary to the simple actions above cited, there are undertakings when we will make an ascent, learn a foreign language or take an examination.

These few considerations will suffice to afford a comprehension of those symptoms which depend on a blunting of the will by intrapsychical afunction. The onset of *affective melancholia* is often manifested in the inability for some very easy undertakings. The tradesman fails, to whom a new undertaking is necessary every day, the student refuses to take the examination, although heretofore he was perfectly certain of his success; it is wholly impossible for another to decide in a certain matter, etc. We here perceive the mildest form of an intrapsychical akinesis. (Many suicides of young men are to be traced to the inability to decide to take the examination.)

The individual actions which remain in the usual rut of daily life may go to the next without delay. Still the aggravation of the action of thought and then the simple action appears in the light of a severe undertaking. The difficulty increases with the complication of the task. It is chiefly manifested on all occasions which are outside of the range of the ordinary course of life, as *e. g.*, when a judicial matter has to be attended to, a journey must be taken; act for or in the interest of others, chiefly in all more important decisions.

Consequently it is hard for the patient to decide the necessary actions of ordinary life, finally any act. In this phase of the disease the complaint is often met with that the patients cannot get up and leave the bed without self-conquest.

The effect of this condition is manifested differently according to the personality of the individual affected. In all more valuable personalities, who sense the actions of daily life to be duties, the feeling of failure and aggravation in the fulfillment of duty leads of necessity to the idea of neglect of duty, wickedness, or accordingly, iniquity, *i. e.*, it becomes the source of the delusion of guilt or micromania. *Fear of the future* is at least developed, which always imposes new tasks on the performance of duty, and this fear of the future is often synonymous with the dread of living longer. An incidental aggravation of this task, even when it comes within the range of habitual duties, readily leads to the catastrophe in conscientious persons. In this respect I will never forget the case of a colleague at Charité, who on return from a leave of absence after an attack of affective melancholia, was given charge of the ward for syphilitic women and could not get over the painful impressions of this service. He shot himself on the day he was to begin the service and left a note containing the significant words: "I am absolutely unable to live longer." He had previously made every effort to get another ward. Suicides of this mode of origin are numerous, and in most cases, only after they have happened, do their motives become comprehensible, for the conditions are such that these individuals are not disposed to express themselves, so that usually from occasional half involuntary assertions which later appear in the correct light, can the mental state of the suicide be concluded.

The self-perception of impeded action of will, the *feeling of subjective insufficiency*, is the most significant and characteristic symptom of affective melancholia. It is often succinctly described by the patients and forms the cardinal basis of their intense feeling of misery.

A blunting of the psychical feelings goes hand in hand with the aggravation of decision. When I speak of psychical feelings I refer to another sort of feelings you have become acquainted with—the organic feelings—which were the opposite to the quality of the sensations, and the latter are endowed with the so-called tone of feeling. The psychical

feelings have nothing in common with these sensations, they show rather that they depend on a prolific intrapsychical activity embracing large associative connections. We understand by them somewhat the following ideas: Love, hate, like, dislike, friendship, sorrow, worry, etc., expressions for certain inner experiences which, with a certain right are presumed to be the same in all persons. While the psychical feelings usually refer to the relations to persons by interest, we understand a similar affect state in respect to things and conditions and speak of an interest in art and science, in politics, in the exercise of some occupation, particularly business, etc. As is seen, interest belongs really to the psychical feelings, and is only diverted from practical oversight on their account. Both are states of the individual which are exclusively derived from the intrapsychical activity. With their aggravation and deduction the patient notices a blunting and coldness of his feelings, *e. g.*, his attachment for his nearest relatives and a lessening of interest, *e. g.*, in business, public affairs, usual diversions. The consequence of this perception is a state of pathological indifference and inner vacuity whose prototype is a blase condition, the renowned spleen of the English. For more finely organized natures, who are not satisfied with gross sensual pleasures, the charm of life then ceases and the thought of suicide, at first indefinite, gradually takes more tangible form. This thought becomes an actual danger when the patients have decided on the method of carrying it out.

The other consequence is micromania or self-accusatory delirium. In consequence of the scholastically promulgated error that the person can control his thoughts and feelings while the thoughts actually control the person, gives rise to the idea of neglect of duty, wickedness, unworthiness, which may be the starting point of the idea of suicide. I no longer deserve to live, I am no longer worthy of the love of relatives, etc., are expressions often heard from these patients. All in all, the mental state of these patients may be most correctly termed feeling of misery. But this feeling of misery, as it has just been evolved, has a very different genesis

than that previously mentioned of hypochondriacal origin, it depends on the perception of the pathological change in the personality and may be regarded a special sort of autopsychical perplexity.

As you see, it is essentially subjective troubles which constitute the nature of affective melancholia. Objective symptoms are first noticeable at a certain intensity of the disease, but may be readily overlooked or misinterpreted. These are the signs of intrapsychical akinesis, then essentially negative symptoms; the patients gradually cease to speak of themselves or to do anything. That could be constated in our patient Mrs. H. But a noticeable retardation and aggravation of the reactions to external suggestion exceeds the narrow compass of our disease. Its reason rests in the following conditions: The absence of reactions, the reactive akinesis always corresponds to a proportionately high grade of intrapsychical afuction, which will likewise hinder the occurrence of the fundamental symptom of subjective insufficiency. This high grade of intrapsychical afuction and akinesis characterized preferably by objective symptoms of defect, we observed often enough in a pathological condition to be entirely separated from affective melancholia which we will term *depressive melancholia*. We will have more to say of this later. Here merely the hint that it is still questionable whether the condition of depressive melancholia can be regarded a special mental disease. Such doubts do not exist for affective melancholia in our restricted version.

A few symptoms are still to be mentioned for the completion of our disease type, which are so frequent that an inner connection of the symptoms must be concluded. The most of these patients complain of anxiety, and this anxiety very often has the stamp of physical, localized anxiety, most frequent by far in the thoracic region, then in the head. The "sad thoughts," a frequent expression for suicidal ideas, are manifested very especially in the attacks or in exaggeration of the anxiety. This anxiety can only be regarded a direct consequence of the inhibition of intrapsychical function. It is the same with a second symptom, the

monotonous persistence of certain annoying ideas obtruded which the patient cannot get rid of. According to their content they are of two kinds, either referring to experiences of the past and in connection with the subject of the self-accusations, or of hypochondriacal nature. Slight muscular pains lead to the idea of being paralyzed forever, a feeling of globus in the neck is interpreted as cancerous, *molimina uterina* or *alvi* as disgraceful sexual diseases. The feeling of misery and hopelessness of the patient is thus increased. The emergence of such "supraquantivalent" ideas seems to be a comprehensible secondary effect of the same disease process, which is the basis of the aggravation and lowering of the associative activity. Finally certain general symptoms are to be taken account of. Many patients have a coated tongue or still more evident symptoms of a gastric catarrh, all have poor appetites, which may be increased to pronounced aversion to food. The majority have cold, often cyanotic extremities.

Affective melancholia is usually developed quite slowly, in the course of weeks or months, from almost imperceptible prodromals. It therefore first becomes evident to the patient and the relatives when the symptoms above described are distinctly developed, and its diagnosis is then easy by proper suggestive questions. The disease type is colored somewhat individually, accordingly as the self-accusations, the feeling of misery or the blase condition is more prominent. The self-accusation is occasionally confined to the idea of being to blame for the illness by having incorrectly understood or neglected some orders. Besides, its content varies according to the individuality. Especially frequent is the false idea of being to blame for the death of some deceased relatives, in that by different care and other regulations they could have been saved, the occupation affords the content for more or less fanciful self-accusations; the merchant says he is a swindler; the officer, he is dishonorable, etc. Secret sins of youth and sexual excesses are very common self-accusations.

Affective melancholia may further develop in the way that the intensity of the symptoms depicted attains an es-

pecially high degree. In this case the patient's complaints which heretofore have not transgressed the bounds of possibility, take on a fanciful and evidently improbable tinge, *fanciful micromania* results. The patient accuses himself of being to blame that there are so many persons ill, that persons must starve, that the world comes to an end. The fanciful element appears in assertions which have for content the failure of the association action, as *e. g.*: "I am no longer a person," "I can never die," "evening will never come again," finally "nothing more exists." Such assertions can only be interpreted that the failure of the association paths to render possible the picture of the world, of their own personality and of the body becomes conscious to the patient.

From the same micromanic idea, namely of unworthiness to live, especially to eat, may result in persistent refusal of food with violent resistance of all attempts to feed.

The micromanic ideas may have the form of voices. The patients hear the most hideous misdeeds charged to them—hear words like: "Murderer, aduress, whore," and as expression of hopelessness words like: "Eternally damned" or "eternally lost." But such phonemes are always isolated, sporadic and according to their content in extreme anxiety confined to ideas of autopsychical anxiety.

Hallucinations of sight of more or less confused sort occur in the milder forms of melancholia. They generally appear under favorable external conditions, at twilight or night, and relate to the sad content of the thoughts which occupy the patient. The patients see coffins, corpses or an entire funeral, persons in mourning, deceased relatives. It is usually expressly stated that these are pictures or shadows.

The more severe form of disease may arise from the milder and be its exaggeration, but it may also develop independently, and then usually more acute than the mild type.

The *course* of affective melancholia may be represented in form of a purely intensive curve, *i. e.*, the grouping of the symptoms constituting the disease remain the same during its duration, and only show certain variations in inten-

sity. As already stated, the disease generally develops slowly within a few weeks to its intensity, then to be stationary usually for weeks, occasionally for months, and then just as gradually and somewhat more slowly than it has developed, pass into convalescence and finally recover. Slight variations in intensity may be manifested at the time of the height of the disease. On the whole the course is continuous.

After termination of the disease a phase of mild maniacal exaltation is almost regularly observed, lasting a few days or weeks, and it is always advisable not to discharge the patient before this. The condition of the weight shows quite accurately the inverse movement in the disease curve, and the impending recovery is betrayed by the fact that a further increase in weight does not occur. Disease insight, the general requisite criterion of every recovery, is therefore hardly realizable in the existing disease, because it must be termed a peculiarity of affective melancholia; that it is present to a certain degree during the whole duration of the disease; at least a certain feeling of illness always exists, or a real disease insight is only occasionally lost, and at the height of the disease under the influence of the micro-mania.

The *prognosis* of the disease is in general favorable if the constantly threatening danger of suicide is excluded or known to be met; still there are rare cases in which affective melancholia becomes chronic, and a slow decline in the intensity of the symptoms first appear after years without terminating in recovery or real mental enfeeblement. These cases show in their clinical stamp a certain relationship to depressive melancholia, while the affective color corresponds more to the milder form of affective melancholia.

The disease type which I have outlined is not identical with the melancholia of authors; not with the disease called melancholia by Meynert, which he identifies with micromania. We have already seen and will be more convinced later that this micromania has an entirely different etiology, and therefore must be regarded different. I have no reason to go more fully into the disease types set forth by other au-

thors as melancholia, and will only say that they usually include too much. But an old tenet deserves to be mentioned, the more so as it appears perfectly comprehensible according to the clinical knowledge we have until now acquired. At the time the prevalence of an unpleasant, painful mental state in cases of diseases so differently colored was called melancholia, a time which for many authors has not passed, the proposition has been advanced and since then always fought for, that all mental diseases should begin with melancholia. An exception has been recognized only in certain cases of chronic mental disease, the so-called primary paranoia. Whereas if we reflect that the painful mental state of perplexity in its various colorings forms the necessary attendant symptom of most acute psychoses, we comprehend the meaning of this old tenet and find in it the expression of a correct clinical observation, if very indefinite in content.

If we will understand by affective melancholia simply the disease type I have outlined and trace to the hypothetical state of intrapsychical afuction then in the greatest possible limitation of the number of cases, you will see that it is one of the most frequent mental diseases. As a matter of course, this opinion can only depend on approximate estimation and purely personal experience, still I do not doubt that all experienced alienists will agree with me as soon as they do not confine themselves to the statistics of special institutions, but consider the experiences of the private consultation room.

In fact the large majority of these patients come to the physician's consultation room, and only a small number reach the insane hospital, often greatly to be regretted, as the sad termination proves. This cannot be considered an accident, but a natural explanation is found in the feeling of illness often increased to real disease insight. As much as these patients are willing to concede their mind is affected, just so much on the other hand their irresolution stands in the way when they are advised to go to a closed institution. The relatives are rarely so intelligent that they perceive the necessity of this measure, for the general opin-

on is that only insane belong in the hospitals. Hence every alienist will have cases in which he has cautioned in vain and must limit himself to the prophesy of suicide. On the other hand, I will show that a real hospital treatment may be entirely avoided under favorable conditions.

The conditions just mentioned are, namely, the frequency of the disease, the danger in which the patients always are, the almost certain effect of suitable medical efforts, which will very vividly keep before you the importance of a correct *diagnosis*. In this respect only *one* serious difficulty exists, and that is the differentiation of the large group of apprehensive psychoses in general and the states of hysterical and neurasthenic apprehensive neurose in particular. The differential diagnosis between affective melancholia and apprehensive psychoses depends essentially on the following data: A group of ideas in pronounced cases is common to both diseases, those of autopsychical anxiety and in particular the micromania; in both anxiety is complained of, if in melancholia not so primarily and not with the fluctuations incident to the majority of the apprehensive psychoses. While the subjective feeling of insufficiency, this fundamental symptom of our disease is wanting in the apprehensive psychoses, or is only intimated as a readily recognizable variety of micromania, and thus present an idea of autopsychical anxiety. On the other hand, affective melancholia lacks completely the group of ideas of allopsychical anxiety so characteristic of most cases of apprehensive psychosis. Thus each disease is differentiated from the other by a very definite plus or minus of disease symptoms. This must be the cardinal point of view which will chiefly guide us. Practically of no less significance is the fact that most cases of apprehensive psychosis suffer from numerous phonemes and in content corresponding tone of the groups of ideas mentioned, while the melancholiac at the time he seeks medical advice has no false sensations. The inner relationship of affective and depressive melancholia affords a further point in diagnosis, the indication of retarded thought and speech, the occasionally observed inactivity of the patient—all symptoms which are entirely for-

eign to the apprehensive psychoses. So in most cases it is readily possible to exclude the apprehensive psychoses and to establish the positive symptoms of affective melancholia.

It is often much more difficult to differentiate the hysterical or neurasthenic apprehensive neuroses from affective melancholia. This difficulty is in so far very clear and based on the fact that the feeling of subjective insufficiency may be pronounced in the apprehensive neuroses and actually based on the attacks of anxiety that further the patient's examination, which is essentially directed to the subjective symptoms, has in neurotics a mild suggestive effect and bring to light troubles which in reality do not exist and are only believed by the patient for a moment under the influence of the examination, that finally the feeling of misery and the intact formal action of thought may occur in both diseases in the same way. In such cases it is chiefly to be considered that affective melancholia from the first is a continuous disease, that the anxiety is only an attendant symptom and does not control the disease type so much as in the apprehensive neuroses. Whereas the apprehensive neurosis always occurs in isolated attacks, anxiety is therefore the cardinal symptom, micromania and ideas of real anxiety, even autopsychical are generally absent, and if the idea of suicide appears occasionally, it is of entirely different motive than in the melancholia. If an opportunity is afforded to observe an attack of anxiety, dyspnœa and the symptom of insufficiency of the phrenic nerves will usually be found.* It is often present in the intervals. Finally a careful anamnesis will disclose in most cases a prior existence of hysterical or neurasthenic troubles of other kinds. There are always certain boundary cases in which the differential diagnosis between affective melancholia and apprehensive neuroses is not certain, and this is especially the case when a very pronounced impulsive suicidal tendency exists. These are usually cases of strong hereditary taint and neurotic degeneration, which are otherwise distinguished by their inaccessibility to every sort of medical treatment. In a case of

* See Wernicke, *Die Insufficienz de nervi phrenici and ihre Behandlung*; *Monatschr. f. Psych. u. Neurol.* 2 Bd., p. 200.

the kind I know, the patient, the young wife of an attorney, after she had been treated in hospitals with no benefit and had been taken home on parole, locked herself in the closet for a moment, saturated hair and clothing with petroleum and set it on fire. Her servant, who had looked after her as best she could, but at the moment of the act was engaged with the children, was admitted to the Clinic about a year later with the supraquantivalent idea she must take her life after she had actually jumped into the water.

As above mentioned, the supraquantivalent idea is a usual constituent of the symptom complex of affective melancholia. Its content is generally derived from the self-accusatory delirium of Meynert, and I have said that it may have had actual experiences for its subject. Therefore under certain conditions cases of circumscribed autopsychosis from supraquantivalent ideas may present an external similarity to affective melancholia, namely, always when the supraquantivalent idea by its content approximates those of affective melancholia. I have mentioned former cases in which the suicide of another person, the death of relatives by accident or the memory of a wrong committed, has led to the development of a supraquantivalent idea, to which naturally a feeling of intense misery and also occasionally a feeling of anxiety and tendency to suicide may be combined. The absence of other symptoms characteristic of affective melancholia and the presence of the circumscribed delusion of relativity in these cases prevent a false diagnosis. It is similar with the autopsychoses from imperative ideas when they as quite often result by their content in self-accusatory delirium and micromania. So *e. g.* in the above briefly reported case of imperative ideas of blasphemous content which appeared especially while praying, the feeling of misery was very prominent, the interest in things and persons blunted, the micromanic delusion of depravity and anxiety often present. Nevertheless the history of the origin of the trouble, and particularly the exact description which the patient gave of her imperative ideas, seem to exclude a confusion with affective melancholia.

The *treatment* of affective melancholia is one of the most

grateful tasks of our calling, for it almost always has a good termination, and the dangers which occur are known and therefore relatively easy to avoid. In many cases the appliances of a well conducted hospital are essential, and you will therefore have to keep in mind first of all to send the patient to a suitable institution as soon as you have made the diagnosis. The experienced specialist will at once be able to decide with certainty whether hospital treatment is unnecessary. If this is the case those arrangements must be instituted which only a hospital offers, and these may be readily defined. They consist in providing for absolute physical and mental quiet, nutrition, sleep and absolutely reliable supervision. It is readily seen that these conditions are very hard to secure in a private house while relatively easy in every hospital. If then the patient's family—for the patient's wishes cannot be decisive—does not consent to a hospital treatment in spite of your advice, you will have to so act that the requirements just named are adequately carried out and the patient kept in bed and isolated. You must be ever conscious of the great responsibility which you assume by such a treatment.

The principle of treatment is relatively simple and consists in sparing the patient everything requiring a decision that may excite the psychical feelings or make a demand on their interest. Everything must be presented to the patient as self-evident and related to the treatment, and no action must be expected of him independently. They must be washed, hair combed, kept clean, food and drink brought to them, and all these measures be continued until the patient regards them as purely mechanical and habitual actions, and participates in them of his own initiative. An attendant must, of course, be always present, but speaking to the patient or in any way exciting him be avoided. Under this sort of treatment the feeling of misery rapidly disappears in intensity; it is soon sensed by the patient as extremely beneficial. Nevertheless it quite often occurs that in a relatively short time the patient shows signs of impatience and longs for occupation or return to the family, be it from years of habit, be it from anxiety about the relatives. This de-

sire must not be yielded to, this phase of premature claims then ceases of itself and gives place to insight, that the judgment of the proper time be left to the physician. The food must, of course, be abundant and easily digestible; as soon as possible the patient is to be properly habituated to overfeeding by frequently taking small quantities of milk between meals. Any gastric troubles and disorders of digestion naturally require careful consideration. At the time of convalescence complaints of tediousness and the need of occupation are best allayed by such measures which require only the patient's passive co-operation, like wet packs, frictions, massage, luke warm baths, and so a premature activity can be prevented.

That the prognosis of our disease is in general extremely favorable, I have repeatedly stated. Still this, of course, applies only to the sharply defined type of disease, which we understand by affective melancholia, and I must emphasize this the more, for in the majority and most common text-books of our science you will meet with an entirely different representation. So it is that cases which are essentially different, as *e. g.* of apprehensive psychoses or still more complicated condition, are thrown together with the affective melancholia we know. Even in the clinical lectures of Meynert, to whom we owe so much, you will find a far too broad conception of this disease type. Particularly prevalent are the teachings of Kraepelin, who treats of melancholia according to his dominant principle of etiological classification in two entirely different places, namely, once as the specific psychosis of the "age of involution," or in other words, senile melancholia, which in general is of doubtful prognosis. In reality you will learn that affective melancholia of senility gets well in most cases if it seems on the average to last longer, and more subject to the danger of relapse than the melancholia of adolescence and middle life. Besides, according to Kraepelin, there is a melancholia which is more restricted and is nearer our disease type, which he places with the constitutional diseases and cannot be regarded a disease entity, but a component of a periodically recurrent mental disease conceived as a manic-depressive, or

recently, as circular psychosis. This conception, according to which at least recurrence of the same disease would always have to be expected, I must absolutely contradict according to my experience. Affective melancholia shows a certain, but not essential tendency to recur; at any rate one much less pronounced than many other mental diseases. If circular mental disease is disregarded, which must not be extended voluntarily to single attacks of melancholia or mania, as Kraepelin does, the claim advanced by him with so much certainty may find an explanation in the fact that he has had in his mind the cases of vicarious melancholia to be mentioned later, *i. e.*, cases in which an attack of recurrent mania is replaced by an affective melancholia. A recurrent affective melancholia which occurs in frequently repeated attacks, similar to recurrent mania, does exist but is one of the great rarities. Mrs. H. is an example. These cases all seem to take peculiar position toward the great majority by their rapid onset and decline.

With respect to the *etiology* of the disease the majority of the cases which occur at adolescence and are particularly frequent in women are to be differentiated from the others; the first category of cases occurs almost exclusively in individuals with strong hereditary taint.

(*To be continued.*)

THE QUARTER AND SEMI-DECADE TREATMENT AND CURABILITY OF EPILEPSIA.

By C. H. HUGHES, M. D.

ST. LOUIS.*

THE essential conditions to the cure of epilepsy are prolonged and persistent repressant impression of morbidly impressible vaso-motor and psycho-motor neurone centers. These centers respond abnormally to the causes which provoke epileptic or epileptoid display. These causes are in the condition and mechanism of the cerebral circulation, such as irregular, anaemic or other blood impress or pressure states, as from cardiac irregularity (cardiac epilepsy so-called), traumatisms, autotoxic and other toxhaemic states, as from external sources like camphor or other narco stimulants, external psychic and autopsychic impressions transmitted periphero-neural impressions and similar exciting intestinal sources of peripheral irritation such as those which cause infantile convulsions, superadded to other forms of intestinal toxicity.

Epilepsy may be influenced in its paroxysmal display by sanguineous hyperchlorinization, as it is especially common in excessive meat eaters and eaters of other forms of highly salt seasoned food.

As to the eye strain, it is clearly a concomitant, sometimes an exciting, but never solely, in my observation and judgment, an exclusively predetermining cause of the epi-

* This paper was prepared with intention to be read before the Neurological Section of the Atlantic City meeting of the American Medical Association, but the author was unable to attend.

leptic neurone change, my much esteemed friends Gould, Stevens and Ranney to the contrary notwithstanding. Nevertheless, all errors of refraction, and all other forms of peripheral brain irritation, should be corrected so far as may be practicable, in the treatment of epilepsy. The removal of eye strain may suspend the manifestations of epilepsy until some other source of peripheral strain reawakens its display, but the epileptic and the epileptic neurone change that makes the access of a paroxysm a possibility should be treated, and treated for a long time, after all abnormal eye conditions may have been corrected and the epileptic symptoms should be treated. Thus epilepsy may be cured, and has been cured in my experience, despite the persistence of eye defect. I cured epilepsia before our ophthalmologic friends had succeeded, as they have now, in so effectually remedying these ocular defects which are so often the external expression of internal neuratrophic deficiency.*

"At the instance of the superintendent of the Craig colony, Dr. Gould visited it in August, 1902, (*American Medicine*, April, 1904) and made a thorough test of the ocular conditions and the benefit of their corrections in 78 patients. The number of attacks each patient had had before this study and after was recorded, and in one case in which the patient had grand mal of great severity it seems that arrest was made and a possible cure may be anticipated. He has had no attacks for a period of 11 months. Five previous arrests were possibly sustained by the use of glasses, and there was an apparent decrease of the attacks in eleven cases, though not permanent or so slight as to make it impossible to say that it was not due to the ordinary fluctuations of the disease. In 33 cases the attacks appeared to be increased, and in 16 there was no change whatever in the symptoms. The experiments, says Spratling, seem to prove that in looking for the cause and cure of epilepsy we must not confine our attention to any single organ and its abnormalities, but must study the whole organism and its parts. He regrets that the experiments, so

*For a further and antecedent discussion of this subject see *Alienist and Neurologist* January, 1899. Paper read by this author December 3, 1898, St. Louis Medical Society.

carefully and scientifically made by Drs. Gould and Bennett, did not yield better results, but it strengthens his opinion that epilepsy is not a "single prescription disease," so to speak, and that the correction of ocular abnormalities alone is not any more likely to cure it than surgical measures on the brain from which so much was at one time hoped. (In which statement we fully concur.—AUTHOR.) Dr. Gould publishes an addendum to the paper in which he supports his formerly expressed views, and thinks that two mistakes were made: 1, that young patients and only those with less injured nervous systems should have been chosen, and 2, that resident or frequently visiting opticians and oculists should have been insured to make the retestings and readjustments when necessary. Still he considers that the apparent improvement in 19 out of 57 patients, and the one cure in 57 against one in 80 by all other methods of treatment, indicate the value of the method."—*Journal A. M. A.*

When we consider the skill and care brought to this experimental work by these eminently capable ophthalmologists, it must be conceded that the eyestrain theory of epileptic causation is not tenable, though it should not be overlooked as an aggravating factor. The disappointing result of only one out of sixty-eight of such cases experiencing any marked benefit in postponement of his paroxysms settles the question as to causation. The same is true of what one of my patients who afterwards, in despair committed suicide, called the eye trimming process of Dr. Stevens.

The essential and predominating cause of epileptic display is the abnormality of the epileptic neurone grouping, the change in the impressibility and expression of the epileptic cerebral neurones, either idiopathically, existing or developed *de novo*, during some period in the life of the individual, as in the persistent exudate or pressure change of paresis or syphilis and cerebral traumatism, vascular distentions, other exudates, traumatism and toxines arising from within or coming from without the system, as from poisonous narcotic stimulant agencies, or medical ministrations, or alcohol, or cocaine, or camphor, etc., taken by the victim often

destroys the integrity of the higher nerve centers and alters the normal individuality of the cerebral neurones in psycho-motor and vaso-motor areas by prevention, or perversion, or limitation of their nutritional or physiological movement and epileptically changed cerebral neurones result—irritable explosive neurones, (adopting the Jacksonian description and applying it to neurones instead of psycho-motor areas or centers.) When the vaso-motor centers suddenly take on their characteristic contractile action in excess, and the normal blood supply to the morbidly impressed epileptic neurones of one or many psychic or psychomotor neurone centers is cut off, as the case may be, a condition of partial or general epileptic paroxysmal neurone change takes place and a paroxysm of epileptoid vertigo, limited Jacksonian spasm, with consciousness (*petit mal*) or the all around and complete coma and convulsion of *grand mal*, follows. This takes place whether the vaso-motor excitation and constriction is followed by exhaustive reactionary dilatation or by vaso-dilator arteriole vascular enlargement, according as we may view the anatomy of the vaso-motor system.

The problem in the cure of epilepsy is to restore the integrity and physiological equipoise of the epileptic neurone wherever in the epileptogenic zone impaired neurone integrity permits the characteristic periodic and paroxysmal morbid display whether in the psychic, as in true vertiginous epilepsy or in the Jacksonian psycho-motor, or in general form over the entire psycho-motor region and psychic cortex areas, with sudden preliminary coma and the characteristic immediately following general convulsions and the peculiar facial, oral and mobile pupillary expression.

To accomplish this we must maintain a persistent impression on the morbid and abnormally acting cerebral neurones especially involved. These damaged neurones date their defect back to parental neurone violence in many instances, done by vicious parental habit, such as alcoholic intemperance. Others, and mostly all the rest, have a more or less hereditary predisposition, even though the epilepsy or epileptoid come on in late childhood, syphilitic, alcoholic and paretic epilepsy of later periods being the

chief exceptions. This therapeutic impression on the epileptic neurone must be not alone repressive of paroxysmal tendencies but reconstructive of neurone integrity and consequent hereditary stability of function under extraordinary cerebral stress, as of a profound or violent psychic impression, or the presence of a disturbing toxine in the blood of the brain. An autotoxine may produce an epileptic paroxysm. It is not the sole cause. Persistent toxicity, or the constant coursing of the blood poisons from without, may develop the epileptic change in cerebral neurones. But the epileptic morbid habit must be due to this pathological change in neurones, though it has thus far eluded the search of the microscope and the laboratory as to its precise pathology. But we know it exists, because all disordered functions must have a sub-stratum of organic derangement, molecular or ionic.

After and before, and along with repression of the neurone functional perversion of epilepsy and epileptoid states we must go on with equal persistency with the restoration to the normal state of integrity of physiological nutrition and rebuilding of the damaged epileptoid neurones. And from what we know of neural grouping and chaining together of these physiological units of nerve force, and of the results of breaks in the chain of nerve connection and influence throughout the body in general, as well as special, in this disease, the epileptic to be effectually cured must be treated in his entirety, in his whole organism. The alimentary tract, the gastric, pancreatic, all hepatic, renal, digestive and food appropriating functions need proper daily psychic impression and constant daily therapeutic consideration, as well as the disordered brain, and a favorable repressive impression should be promptly made on the paroxysmal display and unremittingly kept up for years, allowing no respite or backward step, pending the reconstruction of the damaged and abnormally acting epileptic neurones.

A detail of treatment must be reserved for a future paper, but the judicious use of the bromides, always accompanied with hypophosphites, lecithin* and nerve tone rebuild-

*Lecithin with its fat, its nitrogen and phosphorus is always present in normal protoplasm and never absent from myeline and healthy cerebral gray matter, and should be sup-

ers generally and suitable systemic treatment, likewise cephalic galvanization, as recommended by me thirty years ago for this disease, is an essential part of the treatment. Hypochloridization of the blood and abstention from salt demanding food, or from salt with food, may diminish the dosage of bromides, though I did not adopt this plan in the cases here reported except by reducing the meat diet to a minimum, usually one meal of beef or two of fowl or fish a day.

To succeed, a normal appearing status must be established and persistently maintained for years, while the reconstruction of the damaged epileptic neurone is being accomplished. From two to five years of constant treatment as faithful and persistent as though the case were one of dysentery or pneumonia, is essential for safe and sure results, and this course with complete control of the patient, will bring the surprisingly satisfactory results of a healthy appearing suspension of the disease in most cases and a cure in many. A milk and fruit and vegetable diet should predominate. The patients daily hours of brain tranquilization and sleep should be prolonged for a sufficient time to insure perfect and habitual brain rest and mental tranquility.

The use of intestinal antiseptics and digestives is a routine practice with me, a little for some, more for many. Most epileptics have more or less intestinal atony along the digestive tract, especially as they approach and just after they pass the period of a paroxysm. Of late years the improved enzyme preparations, the pepsines and peptonoids have been of signal help in keeping the *prima via* free from toxic sources of peripheral cerebral disturbance. An active anti-malarial, anti-rheumatic or anti-syphilitic course is essential to the cure of some cases.*

In my early practice I used the nitrate of silver and gentian and the mild chloride or protoiodid of mercury for this purpose, the latter I use chiefly, watching carefully and

plled in some form to the unstable neurones of epileptics. They need its nitrogen and phosphorus though we may get these essentials to neurone reconstruction in less readily appropriable form in yolks of eggs, hypophosphites, etc.

*There is a valuable recent clinical record in last April number of the *Journal of Medical Science*, by W. Vincent, in which the fits ceased under five grains of salicin ter in die.

correcting all discoverable diathetic states and nerve center disturbance sources.

The first recovery of grand mal, and the only one I treated in my first year of practice, (1859), got well under nitrate of silver, milk and vegetable diet, mercurial cathartics once or oftener each week, and a calm country life. He was accustomed to mix a little beer with his milk at meals, and take this regularly three times a day, and I did not interdict the habit as the amount of beer did not exceed four to six ounces at a meal. When he grew to manhood he entered the United States mail service and never had a return of his malady. As a country boy of early to bed habits and mostly fed on milk, eggs, corn bread, honey, syrup and a little bacon daily with potatoes, apples, peaches and other dried fruits, as was the gustatory custom of that day with most people in that part of Missouri, his dietetic and sleep habits helped toward his cure, though he had become epileptic in spite of them.

The nitrate of silver treatment of epilepsy in vogue with the older doctors of remoter days, like some other good remedies, mercury in typhoid and diphtheria for example, once abandoned in these latter diseases, because Simon showed that it defibrinated the blood, but later resumed with benefit, confirms the now growing conviction that ptomain absorption is at fault as an exciting cause of the paroxysm of epilepsy in many cases. But this is not the cause of the epileptoid condition. The cause is that characteristic neurone change that makes one man epileptic and another not. Clinicians have come back to mercury in typhoid and diphtheria as they have returned to the therapeutic intestinal equivalents of argenti nitras in epilepsy.

In my experience there is hope of cure in all but the worst chronic and idiopathic cases with accumulated double hereditary transmission and neuropathically bad home management and unsanitary neglect. Some cases appear to be so handicapped with a doubly damaging inherent neurone degeneracy that nothing will cure, though chemical brakes may be put on the explosively inclined nerve centers so as

to repress paroxysmal display and make life tolerable and not a burden, even in these unfortunate cases.

If any integrity of cell element remains to build upon and we can secure complete and continuous control of the case for from two to five years, preferably three to five years, with entire acquiescence in all our measures, I think we should undertake treatment hopefully. With our present knowledge and resources I think it is a mistake to say in any case of epilepsy, until after a prolonged effort at cure, that it is incurable.

With our present knowledge and resources we do ourselves an injustice, and the victim likewise, to class epilepsy as an *opprobrium modicorum*. Too many cases now reward our persevering effort to justify us in conceding so hopeless a conclusion.

It must be apparent that adequate management, as well as proper medication, are essential to successful results in so formidable, and as ordinarily treated, incurable a malady. The most of the failures of success with epilepsy are due to the physician not treating persistently and over many years, with entire control of the patient.

The psychiatry of hope and hypnotism, and of good environment and general health, promoted by the best means and wisest measures within our knowledge should not be withheld from the patient.

Confirmatory of the most hopeful but not generally current attitude of the profession respecting the curability of epilepsy, I submit memoranda of cases still remaining recovered after twenty or more years since the final medical treatment.* The most sceptical will hardly maintain that

* Epileptics remaining free of epilepsy after twenty years from date of last treatment:

M. B.—Treated in early childhood, now married and mother of children, all free from epilepsy.

M. M.—Treated in early childhood, died recently of pulmonary phthisis.

H. M.—Treated in early childhood, now a mature, well woman, unmarried.

Jos. H.—Came under treatment at age of 16, now well and in business.

R. E.—Came under treatment at 17 years of age, appeared recovered for fifteen years, died in railroad accident.

J. H. O.—Came under treatment aged about thirty years, in business and free twenty years after treatment.

Capt. McK.—A steamboat captain still in business; was unfit for business when he came under treatment.

W. G. B.—Stationer in business at time of treatment, and continued.

these recoveries are only transient interruptions. They were none of them hospital cases but cases kept track of, whose address may, under proper circumstances, be secured by the proper persons.

Many different pathological states have been found associated with epilepsy and epileptoid display as antecedent, concomitant or sequent, but no specific autopsic conditions have been invariably associated with this elusive disease; ventricular cerebro-spinal fluidic changes, ependyma alterations, meningeal and neurone damage cranial traumatism, and cerebral vascular derangements, like aneurisms, emboli, thromboses, arterites, arterio-scleroses, atheromata, etc., and I have personally observed, as a sequence of trepanation, an access of seizures coming on with the extraction of a spicula of bone and passing into speedily fatal status. Many other neural states besides traumatism call epilepsy into being, like the gummata of syphilis which causes so much late in life epilepsy. So that there is no constant epileptic lesion beyond the vaso-motor center disturbance, and that no minutely searching glass has ever yet fixed in definite pathological form.

A clinical experience of forty-five years confirms as neurotherapeutically correct the principle of therapeutic tranquilization and rest, pending chemical reconstruction of the wrong responding neurones, in all forms of epileptic or epileptoid disease. This implies adequate and persistent brain rest by sleep and suitably induced brain cell inaction and freedom from all sources of toxhaemic vaso-motor or vaso-constrictor, undue psychic and psycho-motor irritation. On this principle, nitro-glycerin, nitrit of amyl, alcohol, excessive coffee, tea, especially toward the repose period of each day, are objectionable, save for special exceptionable and transient indications such as the need at times of digitalis, strophanthus, spartaine, cholagogues and digestives, and tobacco always.

MIXOSCOPIC ADOLESCENT SURVIVALS IN ART, LITERATURE AND PSEUDO-ETHICS.*

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A CERTAIN bourgeois mixoscopia finds enjoyment in gloating over a supposedly coarse element in the unconventional even where this is simple, beautiful and natural, except to this primitive obscene twist. James Whitcomb Riley† unconsciously voices this feeling when anent, delicately beautiful love of his youth fittingly terminated in marriage, he sings:

In fact to speak in earnest, I think it adds a charm
To spice the good a trifle with a little dust of harm.

This mixoscopia underlies the delight avowed purists take in depicting the ecstasy felt in evil as a relief by certain very conventional types, which ecstasy was strongly in evidence in the Puritan period as witness Hawthorne's pictures of the Witches' Sabbath emotions. Through intervicaration of religion and sensuality this mixoscopia sometimes assumes the form of revolt against purity in the true delicately beautiful sex sense of the term. Through this

* Continued from the May (1904) *Alienist and Neurologist*.

† "That Old Sweetheart of Mine."

revolt and through the emotional upsets of early Christianity sprang sects* which in very unequivocal form still survive. The Nicolaitans held that sensual pleasure was the true blessedness of man here and the great end for which he was created, and that in the future life this realization would be immeasurably increased. Basilides was a fountain—or rather a sink—of all uncleanness. The followers of Carpocrates permitted and recommended sensuality and crime. Only those who daringly filled their measure of iniquity were saved; the only sin was in opposing the appetites and passions which God had implanted. The sect enjoined surrender to every carnal inclination, and their practices were in keeping with their doctrines. One sect entertained the stranger with all the plentitude of bed and board. After the meal was disposed of the host would arise and say to his spouse: “Go, exhibit to our guest your charity,” while he retired, that they might exercise their generating impulses. The Nazarains adore God and believe in Jesus as a prophet. They pray indifferently to the Apostles, the Virgin and the ancient prophets. They practice baptism by immersion, celebrate the Nativity, the Ascension and some other festivals, the most solemn of which they call the Festival of the Womb. In this solemnity they salute women with holy respect and affectionately embrace their knees, thus bringing the man’s head on a level with the woman’s abdomen. From this comes their title of Worshipers or Adorers of the Womb. They allow plurality of wives and exalt sensuality into a moral maxim. On the day of the Circumcision—that is their New Year—the women gather together in the hall of sacrifice. The windows are closed and the lights are put out. The men then enter and each takes, by chance, the first woman he finds. This licentious ceremony is renewed several times a year, particularly at the Feast of the Womb. The chief and his wife at these times mingle on a level with the others.

The principles enunciated by these sects were carried into practice by the Antinomians, who held that the elect could commit no sin and were under no bond, having been

* Campbell: Phallic Worship.

made free. The Antinomians were well represented in Burns' "Holy Willie." The Family of Love of the seventeenth century has later reappeared in Ohio and spread westward. The practices of the sect are summed up in that creed of Burns' "Jolly Beggars":

A fig for those by law protected,
Liberty's a glorious feast.
Courts for cowards were erected,
Churches built to please the priest.
What is this? What is treasure?
What is reputation's care?
If we lead a life of pleasure,
'Tis no matter how or where.

The new Family of Love (the Spirit Fruit Culture) was founded by a wealthy, poorly educated farmer, at Lisbon, Ohio, where the "heaven" of the sect exists. The farm which forms the "heaven" is run on the communistic principles of the early Christians, for whose violation through partial resumption of private property views Ananias and Sapphira were punished. The sect sensually adopts the practice of the early Christians, in love preferring one another. Free love, according to one of the chief adherents, takes the place of marriage with this sect. It is much more delightful and does not result in the woe that accompanies mismating of couples. Every man in this society distributes his love impartially toward every woman and every man. For one woman, of course, he may feel a stronger affinity than for another, although loving both the same, and if he does, that woman is his sweetheart. From the printed literature of the sect it would appear that their other dogmas are a mixture of Carpoocrates' and Nietzsche's teachings:

"Self-control is the only devil there is. The marriage law is for fools. Parents have no more responsibility in connection with their own children than with their neighbors' children. Man is free. He has no right to be limited to one woman or to one family of children. His neighbor's children are his children, and his children are his neighbor's. Empty yourself of all personal desires and the desire of the Universal Spirit will manifest itself through you. Take no

thought, have no wants, make no plans. Give your personal self to Spirit and it will then make no difference what you say or do. It is Spirit's business, not yours. Don't dictate to Spirit. If she wants you to rob and steal and go walking with another man's wife, do it. The object of life is to be of use. Don't use God Almighty; let Him use you. Monogamy is the product of man's self-consciousness, and self-consciousness is the devil. Be absolutely non-resistant, else Spirit can do no work through you. Never say 'my wife,' 'my husband,' 'my daughter' or 'my son.' Not one hair in their heads belong to you; they are all God's. What they are, or say, or do, is God's work and no business of yours. Woman has a right to more than one man, and man to more than one woman. Whatever Spirit manifests a disposition to do is right. If a woman is jealous, she needs to have the experience that will make her jealous, else she will never overcome the devil of jealousy. Love is universal; it is not limited to one woman or one man."

The "inner light"* doctrine of the Quakers was similar to, but less gross than the "Universal Spirit" of this Spirit Fruit Cult. It led to many much-bewailed "persecutions" of the Quakers for walking in public naked and allied sex-religious performances. The Anabaptists of Munster had like doctrines with like practices. A Christian Science conception prevention work, "Karezza," is a work of reference in the Spirit Fruit Cult. A professional labor agitator and a plutocrat are among the apostles of the cult in Chicago. The Ohio head whom they profess to accept as a "Messiah" is of a degenerate type, as are many of his Illinois followers.

The Chicago Priestess of the Cult is a girl not yet 20, who has an asymmetric face and unequally placed eyes of Mongolic type. She has received a high school education, and on principle sets defiance not merely to conventionalities but to the ordinary social requirements for reputation. The sect was accidentally discovered in Chicago through the refusal to renew a lease. Ohio has been the seat of many such "heavens" and communistic societies like the

* Macaulay: History of England, Vol. iv.

Mormons and the Icarians.* The Icarians and Perfectionists of Onedia, N. Y., destroyed individualism entirely, even sex relations of the societies being rigidly controlled by the heads of the community. While the Perfectionists criticised disease as a sin, like the Christian Scientists, they did not accept the mixoscopic homosexual principles of Mother Eddy. According to her, immaculate conception may be produced through mental influences.†

This, in France,‡ a parliament has declared possible, following a report of a jury of matrons: Considering the evidence showing that it is more than four years since the said Lord of Aiguemete has carnally known the said lady, declaring that although she has not carnally known her husband, yet having imagined in a dream the person and contact of the said Lord of Aiguemete, she experienced the same sensations of conception and pregnancy that she might have received in his presence, and affirming that since the absence of her husband for four years, she has never had intercourse with any man, and that she has nevertheless conceived and borne the said Emanuel, which she believes to have come about by the forces of her imagination. Considering the depositions of the ladies of Albriche, of Pontriel, of Ocgeval, etc., affirming that such an accident may happen to women; that such things have happened to themselves, and that they have conceived children of which they have been happily delivered, which resulted from certain imaginary intercourse with their absent husbands and not from copulation; considering the attestation of the midwives and of the physicians, the court decrees that the said Emanuel is and shall be declared the legitimate and true heir of the aforesaid Lord of Aiguemete, and charges the appellant to hold the said Lady of Auvermont as his wife in estate and home.

A beautiful reverse of this mixoscopia awakens seemingly shallow natures through an altruism produced by violations of social laws for ends that are not entirely anti-

*Nordhoff: *Communitistic Societies*.

† *Alienist and Neurologist*, 1901.

‡ *Alienist and Neurologist*, February, 1904.

social. In "Ethan Brand" the unpardonable sin lifts the sinner above the coarse sensualists by whom he is surrounded. In the "Marble Faun" a shallow animal-like nature develops into a strong type through a crime. The same elevation appears in the "Scarlet Letter." Südermann, like Hawthorne, has shown this elevating principle in "Regina" and "Magda."

The great nineteenth century apostle of adolescent pessimism who voices the old story is Schopenhauer. The scenes of our life, he remarks, are like "pictures in rough mosaic, which have no effect at close quarters, but must be looked at from a distance in order to discern their beauty. So that to obtain something we have desired is to find out that it is worthless; we are always living in expectation of better things, while at the same time we often repent and long for things that belong to the past. We accept the present as something that is only temporary and regard it only as a means to accomplish our aim. So that most people will find if they look back when their life is at an end, that they have lived their life-long *ad interim*, and they will be surprised to find that something they allowed to pass unnoticed and unenjoyed was just their life—that is to say, it was the very thing in the expectation of which they lived. And so it may be said of man in general, that befooled by hope, he dances into the arms of death.

"That human life must be a kind of mistake is sufficiently clear from the fact that man is a compound of needs which are difficult to satisfy; moreover, if they are satisfied, all he is granted is a state of painlessness in which he can only give himself up to boredom. This is a precise proof that existence in itself has no value since boredom is merely the feeling of the emptiness of life. If, for instance, life, the longing for which constitutes our very being, had in itself any positive and real value, boredom could not exist; mere existence in itself would supply us with everything, and therefore satisfy us. But our existence would not be a joyous thing unless we were striving after something; distance and obstacles to be overcome then represent our aim as something that would satisfy us—an illusion which vanishes when our aim has

been attained, or when we are engaged in something that is of a purely intellectual nature; when, in reality, we have retired from the world, so that we may observe it from the outside, like spectators at a theater.

"Even sensual pleasure itself is nothing but a continual striving, which ceases directly its aim is attained. As soon as we are not engaged in one of these two ways, but thrown back on existence itself, we are convinced of the emptiness and worthlessness of it, and this is what we call boredom. That innate and eradicable craving for what is out of the common proves how glad we are to have the natural and tedious course of things interrupted. Even the pomp and splendor of the rich in their stately castles is at the bottom nothing but a futile attempt to escape the very essence of existence—misery.

"And how different the beginning of our life is to the end! The former is made up of deluded hopes, sensual enjoyment, while the latter is pursued by bodily decay and the odor of death.

"The road dividing the two, as far as our well-being and enjoyment of life is concerned is down hill; the dreaminess of childhood, the joyousness of youth, the troubles of middle age, the infirmity and frequent misery of old age, the agonies of our last illness, and finally the struggle with death—do all these not make one feel that existence is nothing but a mistake, the consequences of which are becoming gradually more and more obvious?"

The pessimistic phase of adolescent mixoscopia appears most strongly in Schopenhauer's views of women, which strongly recall those of the coarse Cavaliers of Charles II's time. "One need only," Schopenhauer says, "look at a woman's shape to discover that she is not intended for too much mental or too much physical work. She pays the debt of nature," he goes on, "not by what she does, but by what she suffers—by the pains of child-bearing, care for the child, and by subjection to man, to whom she should be a patient and cheerful companion.

"Women are directly adapted to act as the nurses and educators of our early childhood, for the simple reason that

they themselves are childish, foolish and short-sighted—in a word, are big children all their lives, something intermediate between the child and the man who is a man in the strict sense of the word. Consider how a young girl will toy day after day with a child, dance with it and sing to it, and then consider what a man, with the very best intentions in the world, could do in her place.

“With girls nature has had in view what is called in a dramatic sense a ‘striking effect,’ for she endows them for a few years with a richness of beauty and a fullness of charm at the expense of the rest of their lives, so that they may during these years ensnare the fantasy of a man to such a degree as to make him rush into taking the honorable care of them in some kind of form for a lifetime—a step which would not seem sufficiently justified if he only considered the matter. Accordingly nature has furnished woman, as she has the rest of her creatures, with the weapons and implements necessary for the protection of her existence and for just the length of time that they will be of service to her, so that nature has proceeded here with her usual economy. Just as the female ant after coition loses her wings, which then become superfluous: nay, dangerous for breeding purposes, so for the most part does a woman lose her beauty after giving birth to one or two children, and probably for the same reasons.

“Then again we find that young girls in their hearts regard their domestic or other affairs as secondary things, if not as a mere jest. Love, conquests, and all that these include, such as dressing, dancing, and so on, they give their serious attention.

“The nobler and more perfect a thing is the later and slower it is in reaching maturity. Man reaches the maturity of his reasoning and mental faculties scarcely before he is 28; woman when she is 18, but her’s is reason of very narrow limitations. This is why women remain children all their lives, for they always see only what is near at hand, cling to the present, take the appearance of a thing for a reality, and prefer trifling matters to the most important. It is by virtue of man’s reasoning powers that he

does not live in the present only, like the brute, but observes and ponders over the past and future, and from this spring discretion, care, and that anxiety which we so frequently notice in people. The advantages, as well as the disadvantages that this entails makes woman, in consequence of her weaker reasoning powers, less of a partaker in them. Moreover, she is intellectually short-sighted, for although her intuitive understanding quickly perceives what is near to her, on the other hand her circle of vision is limited and does not embrace anything that is remote; hence everything that is absent or past, or in the future affects women in a less degree than men. This is why they have greater inclination for extravagance, which sometimes borders on madness. Women in their hearts think that men are intended to earn money so that they may spend it, if possible, during their husband's lifetime, but at any rate after his death."

Reviewing Wallacè's* life of Schopenhauer, T. P. O'Connor remarks that the paternal grandmother of the pessimist recalls that terrible great-grandmother who figures in Zola's pages as the origin of all the evil passion, the sensuality, the madness, the final decay which befell the Rougon Macquart family. Schopenhauer's paternal grandmother, after the death of her husband was judicially declared to be insane, and was deprived of the management of her own affairs. She had three sons. Two of them were undoubtedly of weak intellect. The third, the father of the philosopher, was certainly very peculiar. He was a man of plenty of intelligence, of a strong but somewhat perverse character for a German, as he was at once a good business man and a lover of culture; he was familiar both with the literature of France and of England. He was something of a rolling stone because of the intensity with which he felt things. Dantzic ceased to be a free city. Instead of accepting this state of affairs with the tranquility of most of its citizens, Heinrich Schopenhauer emigrated to Hamburg. He loved England so much that he proposed that his son should be born there, and with that object he took his wife to England. But he counted without that lady, who was a per-

* Great Writers' Series.

sonage whom one could not safely ignore. She got homesick for Germany. Back to Germany they had to go. Thus Schopenhauer was born in Dantzic, and on German instead of English soil. Later on Heinrich Schopenhauer took his son to France and again to England. He always had some new idea better than any which went before for bringing the education of his son to perfection. He was a dreamer and a projector of the type that makes a mess of his own life and of the lives of those dependent on him.

He died rich, and therefore, though there were fluctuations in his business, Heinrich Schopenhauer was not a man face to face with adversity. But he became moody, terribly irritable, and finally was found in the canal. He had either fallen or thrown himself from one of his granaries into the water. There was strong presumptive evidence of suicide.

Arthur Schopenhauer, the son, was more like his mother than his father. He loved the father but never really cared for his mother. A dedication of one of his works to his father, written years after the parent's tragic death, is a touching proof of the depth of the affection of the child to the parent.

Frau Schopenhauer did not love her husband; she married him for position; she probably did not love anybody much but herself. She was a woman of some attainments and of considerable pretensions.

"Mme. Schopenhauer," writes a German misogynist, "is a rich widow; makes profession of erudition; authoress. Prattles much and well intelligently; without heart or soul; self-complacent, eager after approbation, and constantly smiling to herself. God preserve us from women whose mind has shot up into mere intellect."

Frau Schopenhauer had literary gifts. For a considerable time Arthur Schopenhauer was known more as her son than by anything he himself had done. She wrote novels, books of travel, and her fortune—considerable for Germany—enabled her to entertain largely. She lived at Weimar, which, with Goethe there, was then the literary metropolis of Germany. The house of Frau Schopenhauer was the rendez-

vous of the literateurs. Though wealth is able to attract people everywhere, and especially literary men, Frau Schopenhauer must have been something of a personal attraction to have retained her hold over many distinguished and cultured people. She and her son had various conflicts. A final rupture came over a matter of business. The conduct of Schopenhauer after this shows an intense selfishness. For eleven years he never wrote either to his mother or his sister; for twenty-four years he never saw his mother. She died away from him, and Schopenhauer remained a misogynist all his life. At one time he thought of marrying; fortunately he did not carry out this resolve, for he was not a man to make any woman happy. His own definition of marriage is sufficient to show how unfitted he was for that state. Marriage was a debt contracted in youth and paid off in old age. Then he pointed out that the great philosophers—Descartes, Leibnitz, Malebranche, Spinoza and Kant—had been celibates.

He was absorbed in his philosophy, which brought him little comfort. Years after he had published the first edition of his greatest book his publisher told him that a considerable number of copies had to be sold as waste paper. When he tried lecturing on philosophy in Berlin his class-room was deserted, while that of Hegel, whom he detested and despised with all the virulence which belongs to the serene philosopher, was crowded, and this further embittered him. And all the time he was full of the importance of his work—never for an hour lost faith in himself, and never concealed the loftiness of his self-estimate. He displayed much petty irritability. Some woman irritated him very much by chattering outside his door—he was peculiarly sensitive to noise, and especially to the noise of a woman's tongue. He tried remonstrance with his tormentor. This was in vain. Then he lost his not very long temper and turned the woman by force from his door. How much force he employed was tried out in several law courts. The end was that he had to pay the woman an annual income until her death.

His life was lonely. He lived in rooms, and as was the custom, dined and conversed in a restaurant. A French

writer as he saw him in his favorite inn in Frankfort, where, after many wanderings he finally settled down, described him as a very neatly dressed old gentleman, almost like a nobleman of the period of Louis XV., with a beautiful lace ruffle around his neck, a white tie and elegant clothes. He was also an intense lover of neatness and personal cleanliness, not altogether a popular or universal virtue at that period of German life in which he lived. He insisted on taking his cold bath every morning, even up to the day of his death, and when he was not well. His face was also striking, even in old age, which was the time when the French observer saw him. The eyes of a vivid and transparent blue, his lips thin and with a slightly ironical smile, his broad forehead, with a few curls of beautiful white hair on the side—all gave an air of great distinction to his face. His conversation was brilliant and inexhaustible—rich in observation, in originality, in apt quotation, in fearless analysis, and he could hold admirers for hours—until midnight—listening with undiminished interest. He spoke with equal facility German, French, English and Italian, and Spanish fairly well.

Schopenhauer died on September 20, 1860, in his 73d year, peacefully alone, as he had lived, but not without warning. One day in April, taking his usual brisk walk after dinner, he suffered from palpitation of the heart—he could scarcely breathe. These symptoms developed during the next few months. Dr. Gwinner advised him to discontinue his cold baths and to breakfast in bed, but Schopenhauer, with the iatrophobia recurring from plutocratic adolescence, was little inclined to follow medical advice. To Dr. Gwinner, on the evening of the 18th of September, when he expressed a hope that he might be able to go to Italy, he said that it would be a pity if he died now, as he wished to make several important additions to his "*Parerga*." He spoke about his works and of the warm recognition with which they had been welcomed in the most remote places. Dr. Gwinner had never before found him so eager and gentle, and left him reluctantly, without however, the least premonition that he had seen him for the last time. On

the second morning after this interview Schopenhauer got up as usual, and had his cold bath and breakfast. His servant had opened the window to let in the morning air and had then left him. A little later Dr. Gwinner found him reclining in a corner of the sofa; his face wore its customary expression; there was no sign of there having been any struggle with death. There had been no struggle with death, he had died as he had hoped he would die—painlessly, easily.

In Schopenhauer is evident the gloom of the hereditary defect aided by parentally made environment so fertile in producing the arrests of evolution evident in the various expressions of adolescent mixoscopia. His views are peculiarly congenial to that oriental contempt for women which dominates German thought since the onset of the present era of militarism. Nietzsche owes his vogue to the same factor.

(To be continued.)

MORBID EXHIBITIONISM.

By C. H. HUGHES, M. D.,

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FROM time to time the Alienist and Neurologist is consulted by cases of exhibitionism which are as much a surprise to the unfortunate victims as to the astonished public and startled courts. Lately two such cases have come under our personal observation, one in the especial case of Dr. D. S. Booth of this city, to whom we acted as consultant and court expert only; the other was our own personal patient. The court acquitted one, a married reputable young working man who, overworked and brain worn, found himself, in a dazed sort of way, exhibiting his genitals to some factory girls, for which bazarre act of psychic automatism he applied to Dr. B. for treatment. He knew something was wrong with him, and before he was thoroughly bromidized by his physician, the act was repeated and his arrest followed. He was convicted and sent to the hospital for the insane, where his treatment was continued and his subsequent release followed.

My own latest case was in the person of an over-brain-strained minister of the gospel, who, after much study, became extremely reticent, morose and absent-minded, and showed slight recurring vertiginous sensations. He was constipated, slept badly, had a dry tongue and skin se-

cretions, and an excess of phosphates were found in the urine. He conceded the truth of whatever statement was made about his personal exposure, could not explain it, attempted no prevarication or defense at any time, submitted to a course of treatment consisting of brain rest and restorative medication and influences and a vacation. Under this course the vertiginous feelings and the automatic acts ceased.

The purport of this note is to call renewed attention to the pathological side of these acts, which are often those of morbid psychic automatism, in which the normal inhibitions and consciousness are more or less paretic, especially when they occur in married men of long standing moral repute and previously well ordered lives and of naturally erotically satisfied organisms, without the extreme carnal inclinations and vulgar voluntary rapish satyrisms and satyriasis of the lasciviously depraved. -

There are lines to be drawn between the voluntarily vulgar and depraved sensualist and the involuntary exposure propensities and acts of the naturally continent and virtuous, and medical men and jurists should learn how to sharply draw them. On the one side of these lines are the clinical and on the other are the moral perverts.

A venerable minister of the gospel in an American city some years ago, after a long life of probity, when old age had hardened the arteries of his brain, and desire had failed, for his more than three score years had long gone by in his life career, was the victim either of a calamity of this nature or of feminine morbid erotism; and like unto this, the preceding cases we have noted, may have been the following. At any rate there is a clinical side to erotic impulse as well as a moral depravity aspect, which should be diligently inquired into from the standpoint of disease and age decay, (which is indirectly disease), as well as from voluntary depravity or moral degeneracy:

JERSEY CITY, N. J., June 17th.—Judge Blair sentenced Charles K. Cannon, of Hoboken, to serve fifteen years in State prison and to pay a fine of \$1,000. Cannon is worth nearly a half million dollars. He was convicted by a jury

which heard the testimony of seventeen girls, whose aggregate ages range from 8 to 14 years.

Cannon is a widower about 60 years old. He is a leading lawyer and a pillar of Trinity P. E. Church at Hoboken. Cannon has appealed and is out of jail on \$10,000 bond.

The presumption of normal motive to such a man as is above described, or of sane psychic harmony with the natural character, do not appear in the above recital of facts.

A correct psychological analysis from the standpoint of a broad alienistic and neurologic experience might modify the sentiment and the verdict of this court. Such men, if depraved, would not be fools, and if fools and depraved, would most probably have been found out before the age of ripened discretion that comes with the sixth decade. At any rate, the age of the man, his life history, and the record of the fact suggest to the expert in psychiatry the possibility of a doubt of voluntary moral guilt.

The presumption of mental decay and aberration would, *prima facie*, appear to be a more rational conclusion in this case.

The erotopathic perversions of neurone disease degeneracy deserve a more prominent place in medical and legal thought than have yet been accorded them by either physicians or jurists, and neither have Moll nor Kraft-Ebing yet recorded them all, nor Kiernan, nor Ellis, nor other writers on libidinous neuropathy, nor any autographic libido scribe.

Here, as elsewhere in the past history of our great profession, which has so often stood as a defense between disease engendered mental perversions and punishment for crime in form, but not in fact, we must interpose in proper cases the protecting shield of real mental pathology between its victims and public prejudice, and sometimes no more discerning judicial decision. The unchained but sequestered criminally insane, under the shield of a philanthropic recognition of psychopathology, attest our enlightened guardianship of the rights of irresponsible mental disease, in lustrous contrast often with the adverse dicta of high judicial tribunals, especially of the past.

A PSYCHOLOGICAL INCIDENT IN THE COURT ROOM.

By T. D. CROTHERS, M. D.

Superintendent Walnut Lodge Hospital, Hartford, Conn., Etc., Etc.

FOR many years I have urged that inebriates should be treated as irresponsible, especially those who had used spirits for any length of time. These views were generally opposed in the court room and when urged in defence of criminal inebriates, have been regarded as untenable. Formerly a defence of criminal inebriates on this ground was rare, but within the last few years it is quite common, and the courts are obliged to recognize its possibility, and accept theories of limited responsibility, but the subject is not yet very clear. The older medical experts strenuously deny the claims of disease in inebriety, and the more modern physicians admit that under certain circumstances insanity and irresponsibility may be present, while a very small number of experts insist on the recognition of mental impairment and insanity of all persons who use spirits to excess.

As an advocate of the latter doctrine my services have been called for in many important cases, particularly in some of the large Eastern cities. It so happened that on several trials, where the responsibility of inebriates was the central point in issue, that two quite eminent medical experts have been frequently opposed to me. Both of these men were well versed in medico-legal literature and had large experience as expert witnesses in court and both believed that inebriety was largely a moral disorder, and that only in exceptional cases, was the inebriate unable to un-

derstand and reason as to the nature and consequences of his acts. Of course they urged that such persons were responsible and should be punished severely. On the other hand I have contended that no one could be poisoned continuously by spirits and possess a sane mind, and that crime committed under this condition, was not to be judged by the ordinary methods. These views have not often been accepted by the courts or jury, and the opposing counsel and experts frequently made them an occasion for ridicule and contempt. The consciousness of being correct has given me renewed courage to press and support these views wherever there was a reasonable basis in facts. As a result, many of the trials in which these conflicting views became prominent, were scenes of technical word battles in which opinions and definitions were contested, and mental tricks to confuse and disparage these different views were not infrequent. These experts by suggestion to counsel and preparing the questions propounded to opposite experts, often made the scene very lively and spirited and frequently to the disparagement of the intelligence of the witnesses. One of these occasions, especially noteworthy, is the subject of the present paper. The prisoner, a man from a good family, after an altercation with a transient acquaintance over a trifling matter, borrowed a gun and followed him round from place to place and finally shot him.

Both had been drinking heavily and the prisoner had announced his intention to shoot the man before the act, and told several of his friends how he was going to do it. The murder was particularly aggravating from the apparent motive, and persistent purpose, and degree of sanity displayed by the prisoner. His heredity and early history clearly showed that he was a defective, and his conduct in other matters before the crime confirmed this. I was retained as a witness to bring out these and other facts. The friends of the murdered man were exasperated, and determined that the prisoner should be punished to the fullest extent of the law, hence they had employed an eminent lawyer to aid the district attorney, and also strong medical experts, and great interest centered about the trial.

I was surprised to find on the opposite side for the prosecution as medical experts, the two well-known antagonists who had been in conflict with me on several trials before. One a distinguished superintendent of an insane asylum, and author of a text-book; the other a medical teacher and author, and both men of strong personal opinions and large experience as witnesses, and both had occasion to feel annoyed at the acceptance of the views I urged of alcoholic irresponsibility in a previous trial. While we were friendly, it was evident that they were determined, should opportunity occur, to destroy my influence as an expert physician, and show the fallacy of the disease theory of inebriety, which I had urged so often. This case seemed to present some strong features favorable to their views, and difficult questions to make clear to a court and jury. The lawyer employed to conduct the examination for the state was an eminent examiner and a man of more than usual force and legal acumen. It was evident that a great effort was being made, and the defence would have hard work to convince the jury, and explain the insanity of the prisoner. The two expert witnesses were at the elbow of the lawyers suggesting questions and advising generally. There was little dispute about the fact of the crime. The prisoner's previous habits and his unusual conduct on many occasions were clearly established. His heredity and previous excessive drinking were all brought out distinctly, and the attempt to show insanity was skillfully opposed. The hypothetical question by the state was arranged with unusual care and shrewdness, and followed by a cross-examination intended to be destructive to my testimony in every way. The opposite experts were suggesting questions, and the lawyer was presenting them in the most seductive way, to bring out doubtful and confusing replies. While watching the lawyer narrowly I detected mental surprise and concealed alarm at some of my answers. On two or three occasions his astute manner changed, and he was evidently disturbed by something which my answers had suggested. He was clearly asking questions, that had not only been suggested by the medical experts, but some-

thing different with motives, other than the answers he expected me to give. On adjournment of the court it occurred to me that a personal acquaintance might furnish some hint of the character of the lawyer, and thus enable me to understand his purposes better, and in this way neutralize and lessen the sharpness of his examination. After an introduction I quietly congratulated him on the skill of his cross-questioning, saying that I had rarely heard anything so clear, and that it could not all have been suggested to him, that there must be some basis for his knowledge of this subject beyond that of reading. He looked at me with a startled look, as I repeated the idea in another form; said with a quiver of his lips, "You are right. I have some sad experience which has taught me more than books." I remarked that unconsciously we all display the current of our lives, and thought which good observers readily detect. After a little conversation he said, "Would you come to my room tonight a little after 10 p. m.? I wish to have a personal talk with you; but this must be confidential, no one must know it, it would compromise us both if we were seen to confer." Promptly after 10 I knocked at his door and he received me warmly. He said, "Our relations must be dropped in this trial. We meet unprofessionally and I have asked you to come here to talk about an event in my life, which has caused me great suffering, but has been concealed from all my friends." I assured him that it would be confidential and frank. He said in substance:

"I had an only son, on whom I lavished everything that money could procure. He had the best education possible, graduated with high honors, entered the profession of law and gave promise of being a man of more than usual brilliancy. Both my wife and myself were proud of him and looked forward to his success as the triumph of our lives, when suddenly our hopes were blasted by the knowledge of his secret drinking. He had deceived us for years, and finally it broke out into a pronounced dipsomania. He had attacks of impulsive drinking, in which he appeared like a veritable mad man, acting wildly and most

disreputably, associating with the lowest characters and drawing checks on me which, for a while I honored, until concealment was no longer possible. Then followed a few years of angry resentment and fierce quarrels with him in which I tried to make him change by appeal, remonstrance and force, all of which failed. My wife insisted that he was crazy and not responsible, and that I was too severe. To me he seemed a criminal of the worst type, taking advantage of every opportunity, with no respect for his character or mine. As a result of a long series of distressing occurrences I drove him away from home, with orders never to come back. This my wife opposed, and it was the great sorrow of our lives that we should differ so sadly. He went to a Western city and, after a checkered career, was sent to State Prison for life for manslaughter, where he is at present. He appealed to me for help, which I refused. I could not understand his conduct; it seemed that of the lowest criminal and as a possession of the devil. The tender relations between my wife and myself were broken up, and our home was darkened. We never mentioned the name of my son or anything that would recall his memory. Gradually my wife's health declined and, after two years of invalidism, she died of some unknown disease. On her death bed she requested a promise that if ever my son was released, I would take care of him the rest of his life; in this way I might correct the great mistake in not recognizing his disease and protecting rather than punishing him. I have thought of what she said a great many times, and your answers to my questions today opened up a concealed fountain of sorrow and suggested a new light which had never appeared to me before, that possibly my wife was right and I was wrong. Now I want to ask you, did I blunder, and could anything have been done for my boy?"

I told him frankly that his boy was an inebriate and pointed out to him in a delicate way the meaning of the facts of his life and heredity and the possibilities from a full recognition of his condition, and the application of exact means of science for restoration and cure. We talked

the matter over until long after midnight. He thanked me very warmly for what I had said and remarked that his life would change from that evening, that hereafter he would never make a blunder in this direction. Not a word was said about the trial, but I knew that the prisoner I was defending would not be convicted, that my testimony would appear to the best advantage and clear the victim, and that the trial was practically settled. Next morning in the court room the rigid cross-examination went on. His severe, astute manner appeared unchanged, but as we looked at each other there was a clear understanding and a double meaning to all his questions. I recognized in his sharp cross-examination the favorable facts he wished me to make prominent, and that he was convinced of the insanity of the prisoner. Evidently the history of his son was vivid in his memory and he was reassuring himself of the facts of diseases and their meaning. The intense earnestness he manifested in requiring detailed descriptions of insignificant phases of the subject, and his treatment of other more important ones as of little interest, together with forcing confused opinions in some directions, and permitting clear ones to pass in others; all this showed a legal master with other motives than the conviction of the prisoner. In the examination of the state experts he showed the same psychological shrewdness, in encouraging their eagerness to clear up the disputed questions by allowing them to enter unguided into a vast wilderness of explanation and opinions, with citations from text-books and theories, which not only increased the mystery, but involved and left their testimony in hopeless confusion. His apparent efforts to clear this away only increased the doubts and suggested to the defence lines of examination to deepen the obscurity, which they quickly took advantage of. In all this there was an apparent great earnestness to find the exact facts, but literally the theories of sanity and responsibility were mystified by the prolix testimony, and the facts of disease were permitted to stand without explanation, as if they were insignificant. The medical testimony dragged through two days and the jury brought in a

verdict of not guilty by reason of insanity. The experts were surprised and thought the jury stupid. No one seemed to realize that the changed conviction of the state's counsel had actually saved the prisoner from death, and that the midnight interview with me was the turning point of the trial. The zeal of the experts to make out a strong case, and show their learning, had literally invested the question of sanity in a fog bank of doubt, which the jury could not understand, hence they reasoned his insanity was more certain. The state's attorney made a pretense of clearing up this mass of theories, but actually turned them into more confused relations, and the defence concentrated all their examinations on side lines, which had no practical interest and only increased the bewilderment of the jury. The experts were never able to understand the verdict. In their opinion they had established and proven the sanity and *responsibility* of the prisoner beyond all question. Two years later the prisoner died of dementia, which the experts claimed was the result of confinement in an asylum.

Some years after I dined with this lawyer in his home and was introduced to a shrinking, imbecile man as his son. There were no explanations or questions, but I knew that the father had secured the release of his son and was carrying out the instructions and promises of his wife made on her death bed. This lawyer is now dead and his son is an inmate of a private hospital. An obvious lesson from this incident is the power of a shrewd lawyer to make his convictions felt, no matter which side he may be advocating. The testimony of experts in the hands of such a person may be moulded in almost any shape, particularly if the expert is not familiar with his subject, and happens to be an egotistical man. One rule I have adhered to as a witness in court on disputed technical questions, is to have the counsel who employs me, thoroughly convinced of the accuracy of the theories and evidence I shall give. When he is converted to the belief or doctrine I present, he becomes of great assistance to make the court or jury understand the facts. Another fact is important, viz: to study the character of the opposing counsel and attorney; to as-

certain if he fully believes the theories he urges. If he is only professionally an advocate and does not understand or is not convinced of the reality of the facts he presents, he will blunder and exhibit weakness that will be apparent. But if he believes with all his heart and honestly tries to make his convictions clear, look out for him. A thorough knowledge of all the facts that are likely to be disputed and a general conviction of their accurate meaning, is the one essential to make strong and expert testimony.

THE ERRATIC EROTIC PRINCESS CHIMAY: A PSYCHOLOGICAL ANALYSIS.

By C. H. HUGHES, M. D., ST. LOUIS.

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ber of Home and Foreign Medico-Psychological
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CLARA WARD, who married the Prince de Chimay and later eloped with Janos Rigo, a gypsy violinist, is reported to have again eloped. This time with a canvasser, in the service of a Paris Tourist Agency.

Born at Detroit during the panic of 1873, Clara Ward inherited many millions on the death of her father, Captain Eber Ward, the wealthiest man in Michigan, "King of the Lakes," who owned immense forests of pine and built the largest fleet of ships on inland waters.

In her school days in London her impetuous, reckless disposition brooked no restraint. She is reported to have received from her father's estate forty thousand dollars a year, and was heiress to three million dollars. It was at Nice, when she was seventeen years old, that she met the Prince Joseph of Chimay and Karamin, who belonged to the wealthiest rank of Belgian aristocracy and their wedding shortly following, was celebrated with much splendor.

Four years after her marriage to Chimay, she had eloped with Rigo and his violin, she having become enamored of the violinist while seeing him play in a Parisian cafe.

Imperative conception seems to have dominated this unfortunately rich, wrongly reared and inadequately restrained woman throughout her life. This latest erotic impulse will probably not prove to be the last in her career, unless she should have the good fortune to reach her menopause by the time the ardor of this last psycho-erotic escapade shall have waned.

Neurotic instability and limitless financial ability for self-indulgence are twin heritages of evil to their unfortunate recipients.

Nymphomania developed and fostered by means and opportunity for indulgence, does not make better showing for women than Satyriasis does for men, under similar conditions, and Erotomania is sometimes not far removed from Nymphomania in imperious dominance.

The biography of this unfortunate woman shows her to be an erotopath, extremely imperative in her erotic impulses and blind to the ordinary restraining social, moral and organic proprieties that usually govern others of her sex. She is as imperatively impulsive in her erotic conceptions as was one of my hospital patients under legal restraint for pronounced and legally determined mental derangement, who seriously importuned me to secure a stalwart negro man, whom she saw for the first time through the bars of her corridor, for a conjugal companion, repeating the request whenever this negro reappeared on the grounds on any subsequent day.

A sound psychology, based on adequate clinical study of the psychopathic, commiserates these unfortunate, morbidly erotic impulsives, as it does the dipsomaniac and the paranoiac, whom morbid ideas, feelings and impulses dominate in other directions, though women of this fatally endowed class are often misunderstood by theologians, moralists and by the female sex often. The compassionate Master of the hearts of men may have had in mind such an unfortunately endowed and dominated creature when he rebuked the willing stoners of the adulteress and said, "neither do I condemn thee!"

The colder and more stably endowed among woman-

kind do not pity, because they do not know, the fateful tyranny of such resistlessly mastering erotic organisms, even as men in general do not know that there are among mankind organically endowed drinkers, fated by unstable, tyrannical, neuropathic organisms to die drunkards, unless helpfully restrained beyond their own power of impaired will, after once the drink habit is established with them as a daily or other periodic routine.

The Princess calls this and preceding escapades a comedy of Josephs, because the name of each of the three victims of this erotopath's morbid infatuation was Joseph in their respective native tongues, but neither of her last two fancied affinities were Josephs in the scripture history's sense, and the whole career of her loves and lovers has been as painfully and morbidly tragic as her own course has been lunatic.

The tender arms of a legal guardianship should have been about this unfortunate American girl from her youth up through her entire womanhood till now; the tender mercy of restraint from the erratic morbidly erotic impulsion of her unstable mind, inconstant insatiable desire and neuropathically impulsioned brain. The kindly restraint and ministrations of modern medical regulation for minds diseased, and friendly sanitarium shelter and control for the psychopathically afflicted, should have been timely given her. It should be given her now in charity for "all that is left of her," for did ever plaintive unconscious plea for protection from self, of poor deluded lunatic, in other forms of mental aberration, appeal more forcefully to the Alienist psychologist for the succor of Psychiatry, than this unconscious delusional portrayal of her mental state?

The innamorata was found playing checkers with her innamorato, an ordinary Neapolitan, described as a boorish Italian, nine years her junior, whom she had but two weeks before found and loved, as a common railway employe about the station near Vesuvius. Giuseppe Ricciardi is the name of the innamorato for whom this woman deserted the gypsy Rigo, for whom she had also previously abandoned her noble husband. Youthful, regular of feature, effeminate of

look and with a curled moustache, is the cabled description of her new, unlawful and improper last fortnight's love.

In an apartment in the Rue Francis 1., playing checkers with him, thus speaks this unfortunate creature of a morbid erotism, oblivious of violated law of land and normal heart and of her inharmonious relation to environment in general:

"I am playing checkers with Giuseppe, for whom I have left Rigo." "Isn't he lovely?" and leaning over kissed him.

"Giuseppe, you know," she continued, "is Italian for Joseph. Rigo's name is Jansi, Hungarian for Joseph. And the Prince is also Joseph." "Odd, isn't it?" with a little laugh, "but there is only one Joseph for me now," and she kisses Giuseppe again, in presence of her interviewer.

"Sumptuously gowned and with elaborate coiffure, the princess had left nothing undone which might heighten her loveliness in the eyes of her beloved. But the excesses of her life have left their marks upon her. Her once striking beauty is marred beyond repair."

"During her recital" it is said "her eyes hardly wandered from the face of the Italian." She caressed him constantly and punctuated her remarks with kisses upon his cheeks and lips."

"He was not exactly a ticket agent," explained the princess. "He was only a station master at Naples—'kiss me, my master'—and we met most romantically. "It was at the foot of Mount Vesuvius. But it was I who was the volcano. My heart took fire at sight of Joseph. The conflagration was mutual. Wasn't it, Joseph? He does not speak English, nor even French, very well, or he would tell you himself. Wouldn't you, Giuseppe?"

The young man, wearing a sheepish air, nodded his head and smiled.

"As soon as Rigo grasped the situation," continued the princess, "he left Naples and went to London. Then Giuseppe and I had Naples to ourselves."

There was a pause. A Francesca da Rimini could not have been more delicately eloquent.

"Later"—she was smoothing out his fingers one by one—"I joined Rigo in London and returned with him to Paris. There I told him the whole truth. Rigo is a good, kind man, and after the first shock of the news, I was not afraid of any violence from him. But I would not like him to meet Giuseppe while he is still laboring under the strain of the separation, especially if he has been drinking, because Rigo is so powerful. And my Giuseppe is not strong. Kiss me, dear." Here is an apparently correct conception of the lawful nature or rather unlawful nature and quality of the act and its possible consequence to Giuseppe but not to herself, but not of the moral nature of her sin against the proprieties and the rights of her husband or the demands of Divine or human law.

"You see," she goes on, "we have only been together two weeks—"and the princess apologized for her exuberance. "The fatigue of his trip from Naples, whence I brought him, and the excitement quite overcame him. That is why I could not receive you earlier in the week (to the correspondent). I could see no one but Giuseppe. I expect to marry him—don't I, Giuseppe?" and another embrace interrupted the proceedings. "But the law does not recognize divorce, so he will become an Englishman, which will take some time." Meanwhile, confessed the princess, "he takes Rigo's place. I expect my uncle to arrive here shortly from Chicago to arrange matters." She expects her uncle to condone this adultery and compound the crime by footing the bill of Giuseppe's maintenance, as he did Rigo's.

It is said the princess demanded again and again, "Isn't he handsome?" When he returned she threw herself into his arms.

"We shall stay here a month and then go to Lake Como," she continued.

"I have bought my Giuseppe a little automobile to amuse him. I shall never return to America and never again go on the stage. I shall live for Giuseppe." And again her lips on his cheek assured him of her love.

"Isn't it a coincidence? I met him on March 20, and I met the prince on the same date. Rigo was a nice boy.

He was always good. Wasn't he good, Giuseppe? Do you want to see him?" And the princess gave the address of her former lover to the correspondent while Giuseppe's face lowered.

"Save for the kisses, which the princess makes so prominent a feature of her conversation with her idol, she is at best only partially intelligible to him. As he speaks no English, during the interview she was constantly interpolating French aside to him. This is a language of which he has only a smattering, however, and love in that case breaks all the laws of syntax and prosody. Ricciardi is plainly impatient of the devotion which he has aroused, and yawned openly between the kisses of the princess."

Here is a refinely reared American woman who acknowledges adultery with two men, publicly embracing and caressing one, with the name of the other on her lips, without shame, without normal appreciation of the impropriety or incongruity of her speech or conduct, referring to the exploitation of her life on the stage, as if it were a mere matter of innocent choice, applauding the goodness of one living lover, but two weeks parted from, to the latest love and asking the last to approve her fulsome, erotic estimate of the preceding, enamourously calling Rigo's name between her kisses of Giuseppe, and all this but a short time after the bridal vow of eternal marital fidelity to another and lawfully wedded husband. Without chagrin or remorse and without reason or justification, she discusses as though they were innocent coincidences, the dates of March 20th, of her adulterous meeting of Rigo and her first meeting of the abandoned, Prince of Chimay—"Rigo was a nice boy", she said, "he was always good, wasn't he Giuseppe? Do you want to see him?" And this to the newest, latest love!

And she discusses Rigo farther, while smoothing out the fingers of the last elected love—"I joined Rigo in London and went with him to Paris. There I told him the whole truth. Rigo is a good, kind man," etc.

This is not the speech of a normal woman and a wife. It is the naive speech of a child before puberty. The nai-

vete of her manner of speech and action, of and toward each and all of her unconcealed erotic alliances, is abnormally inharmonious with the normal character and surroundings of a woman of her social class and rearing.

During her recital of her erotic escapades her eyes hardly wandered from the face of Giuseppe. "She caressed him constantly and punctuated her remarks with kisses upon his lips and cheeks."

Why is this violator of the usages of society and the mandates of moral and statute law still roaming Europe unrestrained in her morbid eroticism, to the shame of society and all true womanhood and the harm of herself? She speaks with the confidence of a diseased inspiration about the experience of the past, in regard to Rigo, and of a monied settlement upon her guilty paramour? Is it true that her uncle is aiding and abetting this riot of erotic disease, by the bestowal of annuities upon her love partners in illicit love?

The restraint of skillful psychological medication and a friendly sanitarium should be given this unrestrained, unfortunate victim of morbid erotic impulsions. For the unhappy victims of such mental aberrations, medical science now ministers to the mind diseased successfully and pities and protects its victims from its abnormal erratic erotisms. Some power should intercede now to save the Princess Chimay from herself.

The intensely amative, but not so morbidly erotic as to be insane, especially among women, are ordinarily secretive on the subject of their predominant passion. They see themselves as others see them, attempt concealment, regard the social proprieties, consider public opinion and do not proclaim to the world, as a right and virtuous possession and proper inclination, their strong passion, as the erotopath so often does in fickle and reckless public displays of wrong affection. Yet exceptionally, some erotopaths are more discreet and cautious, while being quite as helpless under the mastery of the dominant, delusive, overmastering love feeling.

The erotic paranoiac sees and feels justified and com-

placently self-satisfied, though the world condemn his thoughts, speech and actions, as the normally minded do and must. These commiserable women reason rightly, in their own esteem, from the morbid premise of their diseased feelings and approve themselves, while society and the law condemn.

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

SAVARY PEARCE IS DEAD.—In the flesh a promising man within the reach of fame, has gone from us forever. He had but a little while ago completed one of the best neurological text-books, for students, of our day. The book reflected his clear-headed comprehension of neurology and singular merit as a lucid teacher of nervous disease. He died at the age of 37.

Dr. Pearce graduated in medicine from the University of Pennsylvania in 1891, and had been Professor of Neurology in the Medico-Chirurgical College for several years. He was esteemed by his colleagues and was popular among the students.

The cause of his premature taking off was over-zealous enthusiasm due to intense application in the line of his ambition to excel in his chosen field of work. Readers of the ALIENIST AND NEUROLOGIST will miss him, the editor

misses him as a friend and worthy colleague, the College of Physicians of Philadelphia will miss him. His family and all who knew him will mourn him as one too soon taken away from the fruitful field of his labors, where he shone so brightly and wrought so much good to those about him.

With Savary Pearce's death a bright, particular and most promising star of the neurological Firmament is gone out from a brilliant constellation of shining lights in that lustrous grouping which makes the College of Physicians and Surgeons of Philadelphia.

A PHYSICIAN IN THE CABINET is now a near possibility, since the American Medical Association has pronounced for one there.

Now let the Academy of Medicine and all other medical bodies and men of influence be felt in this direction and the probability will be a fact accomplished, for the good of the country.

This journal and its editor first made the suggestion, and their efforts will continue till this just demand and need of the country shall have been complied with. A medical man in the cabinet should be "more than armies for the public weal."

THE NEWER VIEWS OF THE PATHOLOGY OF LOCOMOTOR ATAXIA have lately been plainly placed before the profession in an excellent resume by Dr. John Puntton of Kansas City, showing the findings of Gowers that "the primary pathological changes take place at the peripheral, as well as the central neurone endings."

In this paper the showing of Battey that "tabes is a degenerative change affecting the nerve endings and contiguous parts of the intrafusal muscle fibers, while the nerve fibre itself (outside the muscle fiber) and the spindle in general were intact."

"The muscle spindles seem finally to be coming into their own proper recognition in this disease, as the true organs of the muscular sense and position and weight sense and their lesion in tabes explains the symptoms."

The author also aptly quotes an able collaborator of this journal, Dr. Langdon of Cincinnati, who aptly says "there is every reason to believe that while the peripheral sensory neurone as a whole, is lowered in nutritional integrity, the actual distinctive changes (parenchymatous degeneration) always begin at the endings (arborizations) of the axis cylinders (neuraxones) these being farthest removed from their trophic centers, (the neurone bodies) in the posterior spinal ganglia. Hence the disease is primarily and simultaneously manifested in two places, viz: first, in those arborizations conveying sensory impressions from the voluntary muscles and second, in the terminal arborizations in the oblongata, at the upper extremities of Goll and Burdach's columns."

This excellent paper contains an analytical reference to the review of the recent literature by Schwab, the views of Leyden, Dejerine, Hadden, Obersteiner, Hammond, Pritchard, Mettler and others, and concludes with the following:

"The pathology, in its modern aspect, therefore may be briefly stated, as follows: As a result of a predisposition, hereditary or acquired, and the action of a toxin or toxins (left by a preceding syphilis usually, though not invariably), the nutrition of the nervous system is, as a whole, lowered. In certain groups of the sensory neurones (viz., muscle sense, iris reflex, optic nerve) the impairment is greater or the resistance of the tissue less, and in these groups degenerative changes occur, beginning at the extreme end of the processes (viz., muscle spindles, oblongata, cervical cord). The muscle sense being biologically a late acquirement, the organs which subserve it are naturally less resistant to adverse influence than tactile or motor structures."

The author likens this disease to ordinary multiple neuritis, the main difference being in the function of the affected neurone.

THE INTERNATIONAL CONGRESS OF ARTS AND SCIENCE will meet at the Universal Exposition, St. Louis, September 19-25, 1904. The central purpose of the Con-

gress is the unification of knowledge, a very appropriate purpose at a time when the Nations are exhibiting to the world a display of their progress in literature, art, industry and science.

"After the opening of Congress on Monday afternoon, September 19, will follow, on Tuesday forenoon, addresses on main divisions of science and its applications, the general theme being the unification of each of the fields treated. These will be followed by two addresses on each of the twenty-four great departments of knowledge. The theme of one address in each case will be the Fundamental Conceptions and Methods, while the other will set forth the progress during the last century. The preceding addresses will be delivered by Americans, making the work of the first two days the contribution of American scholars.

"On the third day, with the opening of the sections, the international work will begin. About 128 sectional meetings will be held on the four remaining days of the Congress, at each of which two papers will be read, the theme of one being suggested by the Relations of the special branch treated to other branches; the other by its Present Problems. Three hours will be devoted to each sectional meeting." Related subjects will be arranged on the program for different hours. Addresses limited to fifty-five minutes.

The director is Howard J. Rogers. The administrative board consists of Butler, Harper, Jesse, Pritchett, Putnam and Skiff. The president is Simon Newcomb; Vice-presidents, Muensterberg and Small.

The sub-divided sections are likewise presided over by eminent men, distinguished in the several departments of this work.

THE LEGAL VIEW OF INSANITY.—The vagaries of judges in dealing with the difficult subject of criminal responsibility are notorious, says our London correspondent. A man may be acquitted before one judge on the ground that he was insane when he committed a criminal act, whereas he would have been convicted before another.

Medical evidence they often treat with scant respect, preferring to decide the question by their own lights. The following case is an example: A retired clergyman, aged 62, of Oxfordshire, England, committed no less than seven indecent assaults on girls aged from 11 to 13 within a period of six months. Previously he had had a hard-working and apparently blameless career. The medical evidence showed that there were hardening and thickening of the arteries, especially those of the head, and that he suffered from time to time from dizziness, attended with general mental confusion. There was also defective memory for recent events. He knew right from wrong in the abstract, but did not appreciate the moral significance of his acts in relation to the individuals concerned. The condition was regarded as progressive, and it was stated that the law or moral restraint had no effect on him. He did not understand that he was doing harm to the girls. Dr. Mercier, the eminent alienist, confirmed this evidence, holding that the prisoner was suffering from premature senile decay and both physical and mental deterioration, and that the case was certifiable. The judge pointed out to the jury that the prisoner had filled responsible offices, and had before the trial been regarded as sane. As to the "senile decay" described by the medical witnesses he repudiated the idea that mere decay of the faculties was evidence of insanity or irresponsibility. It lay for the defense to show that the prisoner did not understand that he was doing harm to the children. In conclusion he asked the jury as men of the world to exercise their "common sense." This intimation had the effect evidently desired. After a few minutes consultation they convicted the prisoner, who was sentenced to six months' imprisonment with hard labor.

The "common sense" exercised by the judge and jury in this case was, as it often is, only "common ignorance." Common sense is a strong point, and a valuable one in the character of the ordinary English juror. His weak point is want of subtlety, and on an intricate or scientific question he requires the guidance of superior minds, instead of being told to exercise his "common sense." In the celebrated case of Mrs. Maybrick, who was convicted of poisoning her

husband with arsenic, "common sense" had much to do with the verdict. An array of scientific evidence, if anything, stronger than that of the prosecution, was produced to show that Mr. Maybrick had not died from arsenical poisoning at all. Instead of telling the jury that the prisoner was entitled to the benefit of the doubt on this point, the decision of which in the affirmative was a necessary preliminary to the verdict of guilty, the judge told them not to pay too much attention to the medical evidence, but to decide the case by the other circumstances, thus reducing an essential point to a merely collateral one. The jury exercised their "common sense," to which the fact that the prisoner had a lover strongly appealed, and convicted her.—*Journal A. M. A.*

TO PREVENT TUBERCULOSIS.—The Alienist and Neurologist is gratified at the efforts making in this city to stamp out this scourge. It is by diffusion of intelligence of hygienic resources against the plague among all that success can be secured. For this reason we applaud the move of Health Commissioner Simon and President Eaton and his colleagues of the St. Louis Society for the Prevention of Tuberculosis, also the Baltimore Congress, on this subject and the coming joint congress of medical, legal and lay workers which is to meet at the Worlds Fair next October.

Let everybody now be enlisted in this projected war of extermination of the great White Plague. The medical profession has investigated to the bottom of the matter and warned the people, for many decades past, with "line upon line and precept upon precept;" so there is no longer excuse for popular ignorance and apathy regarding the fatal ravages of tuberculosis and the means and necessity of stamping out the fatal disease.

TWO VALUABLE PAPERS BY ST. LOUIS MEN appeared in the May *Medical Fortnightly*. One by Dr. Heber Roberts on Radium; the other by Frank Fry on Chorea and Graves' Disease.

THE WORLD'S FAIR AT ST. LOUIS is bigger than any little editorial can portray it. It grows and grows on repeated

inspection. It might be seen every day from inception to close and the sight seer would not see all. To see it thoroughly is better than the ordinary trip around the world. After seeing all the Universal Expositions since the Centennial in 1876 at Philadelphia it appears to us to be the greatest of all. And after the exhibits are all scanned and the buildings inspected in the day time, a trip around the lagoons, on the intramural and up on the observation wheel and the electric tower reveals an indelibly impressed, resplendent dream of transcendent illuminated beauty that must remain in the mind forever after.

The Alhambra by Moonlight, so graphically portrayed by Irving is not so entrancingly beautiful.

THE THANKS of the profession and the people of this city are due to the Pure Milk movement lately inaugurated by Dr. Murrell and others and to Mr. Strauss of New York for his generous and humane initiative in the movement.

This move will help to conquer tuberculosis and ward off anaemia and neurasthenia and other ills among infants and children.

DIED ON THE FIELD OF DISHONOR is not permissible, by the proprieties, on medical certificates. If it were, what a role of dishonor and shame, degradation, disgrace and misfortune, would appear in the death certificate of diseases remotely or ordinarily due to alcohol and its toxic compounds and derivatives, from the wine that giveth its color in the cup, to the mocking seductive cocktail and the persuasive mint julep, the whiskey straight, the champagne that paineth only after the night has been spent, in its exhilarating embraces and the malted beverages which, if daily taken in any considerable quantities, delusively bear us to our biers, when otherwise resistible disease assails.

"De Mortuis Nil Nisi Bonum" is the injunction ever present with the charitable physician when certifying the fatal pathologic sequellae of alcohol in any of its myriad enticing forms of illusive destruction.

If the public might know the precise facts charitably

concealed in burial certificates, as to the real ravages of this still-worm chaperone of death, this destroying spirit of the still, it might in time, turn appalled from that autotoxic pathway which leads to destruction, the daily voluntary alcoholic beverage.

And for the sake of the real facts boards of health might have private non-public records of the direct, remote and immediately contributing causes of disease, in which alcoholic causes might candidly appear, to be used as the basis of warning, sanitary statistics, without undue publicity and disgrace of individuals.

AT LAST THE RUSH MONUMENT.—The bronze statue of Dr. Benjamin Rush, presented to the United States Government by the American Medical Association, was formally unveiled June 11, on the grounds of the Naval Medical Museum and accepted by President Roosevelt. Many members of the Association, members of the Cabinet, and other officials were present. Dr. J. C. Wilson of Philadelphia, on behalf of the association, delivered a tribute to Dr. Rush. In his speech of acceptance President Roosevelt said that he accepted on behalf of the nation, "the gift so befittingly bestowed by one of the great professions—this statue of a man who was eminent not only in that profession, but eminent in his service to the nation as a whole." He would improve the occasion, he said, to deliver a short sermon to the eminent specialists before him on the duty of citizenship. "Today," he continued, "no specialist in a democratic country like ours can afford to be so exclusively a specialist as to forget that one part of his duty is his duty to the general public and to the State. Where government is the duty of all, it of course means that it is the duty of each, and the minute that the average man gets to thinking that government is the duty of somebody else, that minute the Republic will begin to go down. It is a fortunate thing for our country that we should have before us the lives of men like Rush, who could take a part in our public life as distinguished as is implied by his having been a signer of the Declaration of Independence, and yet

to do it without a particle of neglect of the man's own proper duties."

The Presidents' reproof and warning to the medical profession to not lapse in duties of citizenship is good and timely. We have delayed long in this duty to the memory of Doctor Rush and would have waited longer had the profession left this memorial remembrance to the people or their representatives in Congress. Reputable medical service and the public service of reputable medical men do not get their deserts at the hands of the peoples' representatives in these days when quacks and 'fake' doctors are heard in halls of legislation and the voices of the regulars and the reputables are silent. Too many good medical men of means, leisure and ability in this country eschew politics, too literally accepting the insulting reproof of that English judge who advised a medical man who justly spoke as an expert in a just cause, to go home to his patients. If medical men continue silent in the synagogue, the political Sanhedrin will continue to ignore medical interests.

Matters will be different when doctors of fame and independence take their proper places in public affairs, secure a medical man in the Presidents' cabinet who will be at least the peer there of the agriculturist and the commercialist. Sanitation and sanitary interests are as important as soil tilling or financiering, and physicians should be as significant in the Governments' and the peoples' esteem as lawyers and soldiers. Right sanitation of body and brain, that keeps a nation strong and great, in mind and brawn, and saves it from decay, is more than armies, to win the fray, in this our strenuous day of world competition and struggle for supreme existence.

In this country of popular government it is the duty of every aggregated interest, whether in or out of a political party, to voice its opinion, on matters of public morals and policy. The medical, or the clerical professions should not be exceptions. It is only thus that official executives of the people may rightly know the popular will among all classes. Partisan papers are apt to give but partial and partisan news, trimmed to suit the exigencies of party, as

the platforms do. Popular sentiment should be enforced from all sources upon platform makers and the safest sources are from the non-partisan interests. There the pulses of the people may best be felt. From their radial arteries radiate the whole truth and nothing but the truth as to how the people feel.

THE CENSOR OF THIS CITY is entitled to thanks for its efforts at eradicating the patent medicine and fake newspaper medicine and medical appliance evils.

Just now the people are being ground between the upper and nether millstones of trust combine, oppression and patent medicine fraud, the latter being directly assisted by the newspapers in their advertising pages and the former being tacitly helped by the silence of the press. Partisan newspapers are all too politic to speak the entire forceful truth concerning these twin evils and some other periodicals are too venal to speak out in the people's interest, while other papers are indifferent.

THE NOISE LIMIT OF CITIES ON THE PART OF THE POLICE.—We note with pleasure the efforts in the interest of human life and limb and vital organs to keep the automobilists and bicyclists within the lawful limits of speed, but why not include the street cars? If a poor cabman, backed by no syndicate of wealth and numbers had violated the law as the 'auto' and 'bike' sprinters have, they would all have been driven from the streets with revoked licenses.

Now while the enthusiasm for public welfare is on with the police, would it not be well to have an ear to the noise limit of street cars, motor cycles and autos, so that people may have a chance to sleep and conserve their vitality for sustaining the strain of living in these strenuous days, when everybody pleases himself, and no one seems to care, law or no law, for the comfort of the other fellow.

THE PASSING OF LISTERINE AND THE COMING OF THYMOL.—The wild thyme has added a fragrance and a therapeutic availability in many ways to the antiseptics

since and before Lambert put his attractively named Listerine on the medical market. Among those was an elegant preparation put up in this city many years ago, but not extensively advertised to the medical profession by Alexander, and called Thymolen, I believe. Later came a similar compound called Pasteurine, but the best and most perfect of them all for antiseptic purposes, both internal and external, is that elegant preparation offered to the professions of medicine, surgery, dentistry and for cosmetic and antiseptic toilet purposes—Euthymol, whose composition and therapeutic availability will at once attract the attention and win the approval, if carefully noted, of every intelligent doctor who may read and try it. And this medicine is not found among our ads, though Parke, Davis & Co., those well known and useful caterers to the therapeutic wants of the profession are.

TULANE GETS A MILLION.—The Louisiana State Supreme Court has rendered a gratifying decision giving the bulk of the estate of the late A. C. Hutchinson, amounting to approximately one million dollars, to the Tulane Medical College.

A SCHOOL OF FORENSIC MEDICINE IN FRANCE.—The French Minister of Public Instruction has issued a decree for the establishment of an institute of Forensic Medicine and Psychiatry in Paris. The institute, which is intended to provide special training and to grant a special diploma to those who wish to practice as expert medical witnesses in the law courts, will be under the direction of the dean of the medical faculty and the professors of forensic medicine and of psychological medicine. It is to be hoped the time is not far distant.

THE PULLMAN PALACE CAR COMPANY is about to introduce a sleeper which, from a sanitary standpoint, will be a considerable improvement over that hitherto used on the railroads of the country. The new standard is severely plain and is devoid of all scroll and grill work. The upholstery of the car has been reduced materially and all the

angles possible have been taken from the car. Imported mohair has been adopted as a standard curtain and the entire design of the decoration and furnishing is planned with a view to minimizing the work of cleaning the car and preventing the lodgment of germs.

BRAIN-STRAIN OR EYE-STRAIN! WHICH? *The Medical Times* notes that five among the most eminent scientists, essayists and poets of the early Victorian era—all of them afflicted with chronic and inveterate ill-health, varying in form, but claimed to have arisen, in every case, from one and the same cause, eye-strain—are the subjects of Dr. G. M. Gould's latest contribution to medical literature. He contends that simply fitting these illustrious invalids with spectacles would have removed the primary mal-adjustment, thereby at once restoring them to the full command and enjoyable use of their great faculties and enabling them to surpass even the measure of what they actually achieved for the benefit of mankind. It is noticeable that all of them—Carlyle, Darwin, Huxley, De Quincey and Browning—managed to reach a good old age, while their mental productiveness lasted as long as is usual with the higher class of brain-workers. In this respect, indeed, they compared favorably with Scott, Southey, and others of their earlier compeers, who were never suspected of heterophoria. *Prima facie*, therefore, the instances our author relies on are not perhaps very strongly conformatory of his hypothesis. But his argument is both so ingenious in itself and so plausibly presented—fortified as it is by a thorough mastery of the scientific principles and biographic details involved—as to seem almost impossible of refutation by any ordinary disputant. In our opinion, what it chiefly needs is that kind of clinical evidence which alone is finally convincing, *the evidence of living contemporaries*. Surely, among existing leaders in the respective domains of science, art and letters, there must be (if Dr. Gould's pathologic view of the matter be correct) quite a number of sufferers from the remote effects of eye-strain, whose symptoms run parallel, or nearly so, with those of the men

he has chosen as examples. Let these, or some of them, be sought out, and induced to place themselves under the most skillful and up-to-date ophthalmologic treatment. It may be presumed that, whatever the result, no objection would be raised to its publication. Directly authenticated testimony such as this would go much further toward establishing or disproving Dr. Gould's theory than any amount of reasoning based upon vague descriptions and complaints in the memoirs of dead-and-gone celebrities. What we require are first-hand statements of their condition "before" and "after," from distinguished individuals still in their intellectual prime.

Brain, eye, nerve and other center strain might equally as well account for the ill health of the aforementioned literary and scientific gentlemen. Gould is a clever reasoner from his visual standpoint, but where are Stevens and Ranney with their eye-strain epilepsy, cephalalgia, etc., and where does the brain itself come into the consideration of brain-strain troubles in the brain-workers and brain-overworkers of this, as well as preceding ages?

AN APOPLECTIC ENGINEER stricken at his post in the engine room permits the ferryboat *America*, of the Grand Street Line, New York to crash into the pier. A patient of mine, a railroad engineer, was found to have epileptoid seizures, though none had ever been known to have occurred while he held the lever. He was advised to work in the shops only, and those above him having disposition of his services were advised to never give him control of an engine.

Railroad men filling responsible posts like engineers, dispatchers, brakemen, switchmen, etc., should be subject to frequent neurological inspection as to their freedom from certain nervous affections involving the head. This is quite as important as examinations for sight defects.

Brains liable to give out suddenly with attacks of epilepsy or vertigo, vertiginous epilepsy, amnesia or sudden paralysis or spasm are out of place in responsible positions on railroads, as much so as men who are liable to become disabled by an inopportune recurrence of dipsomania.

Railroad company managements are beginning to understand the risks and dangers to the service and the public of men who drink. They should likewise have a care concerning other nerve diseases among men whose heads have to be relied on for steady, safe service.

SUICIDES IN THE UNITED STATES.—The St. Louis Republic notes that "George P. Upton, formerly associate editor of the Chicago Tribune, in an article in the New York Independent shows that in thirteen years there have been 77,617 suicides in the United States, of which 57,317 were men and 20,400 were women. Of the professions, 535 physicians destroyed themselves, against 98 clergymen and 61 lawyers. The increase in the number of children who are self-destructionists is a matter of comment.

"Life insurance statistics for 1902 show 2,500 cases of suicide in fifty cities, St. Louis leading Hoboken, Chicago, Oakland, New York, Milwaukee, Cincinnati, Newark, Brooklyn, Boston, Indianapolis and New Orleans. It will prove a surprise to many that St. Louis should lead.

"Mr. Upton does not attempt to solve the problem beyond suggesting that the home exercise more authority "in regulating appetites, passions and habits." He adds that "there might be more hope for the decrease of crime of all kinds if so many homes were not sending out so many boys and girls unwarned, undisciplined, uninstructed and unprotected."

"We are living in an age," comments the Republic further, "when it is a constant battle in business and social circles and when every man and woman is under a more or less severe mental strain. We do not seek healthy, outdoor amusements as we should. Life is a severe struggle for the majority of people and we are inclined to take life too seriously. In every class we are looking beyond. We are not, in other words, satisfied with environment and condition, but are struggling to reach a position beyond us. The natural result is that nervous systems become weakened. Suicide comes with abnormal nerve states. There is not a man or a woman but who at some time has said: 'What's the use?' If the nerve balance is destroyed at such a time

a sudden impulse to suicide may overcome the normal will to live."

A SURGEON OF OOPHORECTOMIC FAME, a really skillful laparotomist, was seen approaching a coterie of our lady friends, when one of this smart set said, "hold on to your ovaries, ladies, Doctor —— is coming and he will get you if you don't watch out!"'

The gold mine, industrial stock, gold brick and all sorts of scheme fakirs, not excepting some of the proprietary men, now reaching out and "going for" "tenderfoot" doctors, who have a rating with Bradstreet's or Dun's, suggest a similar caution. Hold on to your pocket books, gentle confiding doctors or these fakirs will get you.

It is the business of these fakirs to plead plausibly for their schemes and take in doctors, if they are not wise as the serpents that are after them. The medical man on "Easy Street," who has by hard and long work earned the right to be there, is often bunkoed by these business bargain baiters when he least suspects it. The vocation of a doctor of medicine does not tend to the cultivation of business cunning against the bunko steerer. He is a stranger to their ways and they take him in.

DR. A. B. ARNOLD, aged 84, emeritus professor of nervous diseases in the College of Physicians and Surgeons, Baltimore, died at the home of his son in San Francisco March 28th last.

SOME OF OUR JUDGES.—"The decision of the Missouri Court in the Butler case is too unfortunate to pass unnoticed. Butler was the chief in the war of Mr. Folk against the St. Louis boodlers. The Circuit-Attorney secured a conviction for bribery. The Supreme Court now upsets that conviction. The opinion was written by Judge Fox, who has been mentioned as one of the beneficiaries of Butler's favors. Of the two judges who concurred one was a candidate for the Governorship. The ground of the decision is that, as an ordinance giving the Board of Health the right to let a garbage contract was unconstitutional, Butler was not

guilty of bribery when he paid the Board \$2,500 to award the contract to him. These contracts have been awarded by the Board of Health for thirty years. The right of that Board to award them has been repeatedly upheld. Even if the Board did not have the right, we have apparently the decision that an official may take money to perform official acts and then set up as a defence, for instance, that Missouri was not legally admitted into the Union, and hence there can be no official act in Missouri, and therefore, as a member of the bench declared last summer, there is "no boodling in Missouri." The seeming determination to free Butler at any cost has so outraged public feeling and common-sense that the result may in the end be good, by increasing the chances of electing a Governor who will do away with the whole system by which a man is able to buy contracts for himself and secure judgeships for his friends. Meanwhile, the Supreme Court of Missouri cuts a sorry figure in the eye of all the world. Possibly legal strictness required the decision, although we doubt it, and the public will certainly not believe it. The contempt with which the decision has been received, and the implications that have been freely made against the court's integrity, are a sufficient sermon on the evil of a system which does not allow the judiciary to rest above suspicion."

THE WORLD'S FAIR AT ST. LOUIS is an instructive object lesson in its state buildings, the state exhibits in other buildings, and in the annex exhibits of the Philippines, the Boer War and North Pole voyage shows, etc.; of the rise and progress of the United States, and especially of the fourteen states comprising the vast and memorable epoch-making Louisiana purchase, which this exposition commemorates.

The World's people may here see a tableaux vivant, giving an impressive, life-like portrayal of the world's wonderful progress, hitherto unequalled by any other exhibition of its kind. In former similar exhibitions one city and one state have been mainly interested. In this, fourteen states, moulded out of the empire ceded by Napoleon,

are especially concerned and shown, and the whole North American Continent is likewise on exhibition.

The Louisiana Purchase Exposition, besides showing what the world has done and is doing today in all the essentials of a great exposition, reveals, in fuller proportions and grander outline, the stature of our Republic, standing as a giant before the Nations, prosperous in resources, limitless in possibility for the welfare of mankind and invincible for defense of its great humanity-advancing and world-uplifting purposes.

The finishing touches of this remarkable picture of the living world as it is today, may be found, without immoral blemish, on the Pike and at its annex exhibits, save and except, perhaps, the Jerusalem show, where recreation, pleasure and instruction are offered the visitor in many varied forms. Numerous restaurants are also there to replenish the body and brain-weary sight-seer, and the prices of all are moderate for what is given.

MACDONALD RECOVERS \$20,000.—A jury in the Supreme Court before Justice Dickey, has rendered a verdict for \$20,000 in the libel suit of Arthur MacDonald against the New York Sun. The issue was whether MacDonald was an honest scientist and pursuing his work in the Board of Education at Washington in good faith and with pure motives, or whether, as asserted by the Sun, he was a counterfeit scientist, using his work as a cover for ulterior objects.

We are glad to know justice has been done Doctor MacDonald. He is an honest, conscientious investigator and deserves well of the people. The New York Sun was a victim of somebody's envy and malice probably.

THE PRESS PARTICEPS CRIMINIS IN PATENT MEDICINE FRAUD.—Below is one of the many scare head advertisements one may see in the daily papers and often in the religious and literary papers and magazines.

"IF IN DOUBT, TEST YOUR URINE."

"Let a bottle of morning urine stand still, twenty-four hours. If it becomes cloudy, or contains floating particles,

or if a sediment forms, your kidneys have been diseased for months, and your only hope of life and health is to at once take Greenback Ketchum's Safe Sure Cure."

The constitutional guarantee of freedom of speech and press does not hold men who publish newspapers guiltless of aiding and abetting the crime of killing by false representation and delayed relief through patent medicine fraud, and laws should be framed accordingly.

The man who holds you up on the highway and robs you of your money and the man and his confederate who frighten you into taking a patent medicine or keeps you from real relief, through deceiving you into taking, are alike criminal.

The average patent medicine vendor is a blatant fraud and a seductive silent criminal and the newspaper is his 'pal.' The way of the patent medicine advertisement leads to destruction. Its pathway is watered with mourners' tears and filled with funeral processions. The chief beneficiaries of these confederated criminals are the makers of coffins, hearses, funeral palls, diggers of graves and writers of epitaphs over dead men's bones. They are banded bunko steerers to confiding frail mortal gullibility leading on to hopeless invalidism and the tomb.

The thief who steals your purse, the devil who lures the innocent from virtue, the black brute who robs woman of honor's garland, the destroyer of life or virtue or health in any other guise or form, excite abhorrence and move the right feeling heart to sympathy, protest and vengeance, but who condemns the crime of the false hope-inspiring, disease-prolonging, life-destroying patent medicine fakir and his willing friend and joint confederate in destructiveness and gain, the daily secular, and alas, too often the religious press?

DR. EDUARDO MARAGLIANO, whose excellent contributions to neurology have often appeared in this periodical, of Genoa, head of the University of Italy, in a communication to an assemblage of Philadelphia physicians, announces his belief that he has discovered a certain

prophylactic treatment against tuberculosis, and one that will prove of great benefit in the early stages of the malady. He has produced what he holds to be a specific therapy for tuberculosis and bases his conclusions on clinical laboratory work covering a period of thirty-four years.

ESPECIALLY DESERVING of medical patronage are the Ladies' Home Journal and Everybody's Magazine, for the right stand they have taken against the advertisement of fake patent medicines, against lending their pages, as Everybody's Magazine expresses it, "to help swindle the public," to help unscrupulous men to frighten the credulous into believing that all sorts of diseases and ailments possess them in order to sell a lot of cheap stuff at high prices, much of it positively harmful." And other magazine publishers are following their lead.

DIRECTOR STENSON of the Pomological Department of the Louisiana Purchase Exposition commends apples as a cure for evil habits. *Similia similibus curantur!* As the apple began all our trouble, the sons of Adam may now get Even on the primitive transgression with Ozark Mountain red apples, and that section of Missouri raises enough to supply a sinful world with the pomological antidote.

TABLOID AND SOLOID have been sustained by British courts as proper protected trade marks of Burroughs, Wellcome & Co., and these words stand for good goods and elegant and accurately made pharmacals for ready dispensing.

PATHOLOGICAL EXHIBIT AT THE ST. LOUIS FAIR.—Under the general direction of the American Medical Association there will be a pathological exhibit at the St. Louis Fair, showing pathology and bacteriology especially.

DR. CHAS. G. CHADDOCK'S ADDRESS before the Medico-Psychological Society was a masterly presentation of the progress of modern Psychiatry.

SELECTIONS.

CLINICAL NEUROLOGY.

AUTO-AGGLUTINATION OF THE ERYTHROCYTES.—

There are many peculiar phenomena among the so-called immunity reactions. One of the most peculiar is the ability of an individual's serum to agglutinate his own corpuscles under certain conditions. This phenomenon has been observed in Hanot's hypertrophic cirrhosis of the liver by several observers (Klein, Hayem, Reitmann and Obermayer.) It will be remembered also that Flexner considers auto-agglutination of the red cells to be responsible for the thrombi which often form in typhoid fever, pneumonia, etc., the bacterial toxins possibly causing the agglutination. Eisenberg has observed auto-agglutination in a case of generalized pyocyaneus infection, arising from a severe wound of the leg. It has been noticed during the course of the infection that when blood was withdrawn for examination it did not clot in the ordinary manner, but the corpuscles gathered in clumps and sank to the bottom of the pipette, leaving clear plasma above. This is the phenomenon of auto-agglutination. The serum from such blood was also isoagglutinating to some extent, that is, it would agglutinate the red cells of another individual. "At the autopsy the blood in all vessels, especially the cerebral vessels, appeared as a colorless fluid, in which heaps of coherent corpuscles were suspended in the form of red points." Blood obtained from the heart separated into a layer of agglutinated corpuscles at the bottom, while the serum collected at the top of the tube. Singularly, however, the serum had lost the isoagglutinating properties

which it had during the patient's life. Eisenberg explains this by supposing that after death all the agglutinating substances had been absorbed by the patient's own corpuscles during their agglutination. This accords with the well-known fact that cells can absorb more agglutinin than is necessary to accomplish their agglutination. This observation raises a fundamental question. The patient's blood contained something which was capable of agglutinating his own corpuscles, yet this agglutination would occur only when the blood was withdrawn from the body or after the patient's death. This suggests in the first place the view of Metchnikoff, that the "immune bodies" exist for the most part intracellular in the body, i. e., in the leucocytes, and are liberated only when these cells disintegrate after blood is drawn or after the animal's death. It suggests also how vastly different processes in the test-tube may be from those in the living body. From observations of this nature, of which there are other examples, it is evident that there is much which is yet dark as to the *modus operandi* of the immunizing substances.—*Journal A. M. A.*

THE HEART AND VASOMOTOR SYSTEM. L. F. Bishop, New York City (*American Medicine*). The frequent discrepancies between the heart-sounds as heard by the stethoscope and the pulse as determined by palpitation must have impressed all observers. It has been a matter of surprise that hearts, which, by their sounds, seemed to be doing good work, were often accompanied by a pulse giving a poor impression, and on the other hand, cases showing irregularities of the heart-sounds have been associated with a pulse showing a fair degree of regularity.

When it is remembered that, in the light of evolution, the heart is constructed of the same elements as the bloodvessels and is only a differentiation of the circulatory tube, and when it is appreciated that not only the blood of the heart but the blood of the whole circulation is surrounded by a muscular envelope that maintains its pres-

sure, it can easily be seen that in palpating any portion of this blood-containing system, the variations in pressure will be a complex of the whole envelope and not merely of its strongest portion.

The vasomotor system is much more liable to disorder than the heart and the heart is able to compensate for a good deal of misbehavior on the part of the vessels, but in compensating, it often appears to be misbehaving itself. Thus, one may fall into the error of predicating disease of the heart-muscle when the trouble really is a functional derangement of the bloodvessels. In many of the cases that are strikingly benefited by the Nauheim treatment the results are undoubtedly obtained by a restoration of the peripheral circulation and the relief of the heart from a struggle to compensate for it.

Not only clinical but pathologic study confirms the fact that diseases of this class, including myocarditis and nephritis, have their origin most often in degeneration of the bloodvessels, at first functional and then organic. The coronary arteries of the heart become involved and then the heart-muscle suffers. The vasovasorum of the bloodvessels suffer and then the larger vessels, so even in the early stages of circulatory symptoms, the relationships should be appreciated and the hygiene of the peripheral circulation becomes a matter of serious supervision.

LUCIEN LOFTON'S DON'TS IN MODERN GYNECOLOGY.—These valuable "don'ts" are as good as if an alienist and neurologist had prescribed them. They are equally as good in the practice of neuriatry and psychiatry.

Don't tell a patient with merely an eroded os that an operation will be necessary. Treat the condition always first.

Don't make digital or macroscopic examination too lengthy.

Don't attempt to mix private matters with the sacred science of gynecology. The two are incompatible.

Don't even criticise a woman who is unclean. Remember ignorance plays no uncertain roll in the life of everyone, hygienically speaking.

Don't ever display anger while making any exploration. Gentleness, politeness and kindness are the cheapest and most effectual weapons one may possess in all vocations.

Don't depend on a female patient to carry out your initial instructions, but show her yourself. Results come then.

Don't make a hurried digital examination because you may have to make many. Once well done relieves constant and unwarranted dread upon the patient's part.

Don't criticise a lacerated perineum. No woman likes to be reminded that her much-loved accoucheur did her wrong, when she wasn't looking.

Don't remove an ovary if you can remove the pain. A sexless woman is a slab-stone upon the waning popularity of the excessive debauchery of abused women.

Don't pronounce every abdominal pain of ovarian origin. Women are surely susceptible to appendicitis and mostly every other ache to which the stern sex is liable.

Don't call upon the surgical world to note your matchless method of doing a hysterectomy, but rather call upon all the science and skill that within you lies to save every poor sufferer the humiliation of such a formidable undertaking.

Don't forget that narcosis has removed many enormous cystic (?) tumors in time.

Don't attempt the specialty of gynecology without cause, a wagon load of "horse sense" and years of experience. There are men in business who have been in harness for several decades, who are still staying very near the bank, and who will not approach deep water, save under high pressure.

Don't thrust upon a neurotic the appalling news that her condition is always due to an abnormal position of her womb.

Don't tell a candidate she has "falling of the womb." Thousands go around every day expecting this shamelessly censured organ to fall between their knees any moment.

Don't delude a woman into believing her uterus is

pinned to her spinal column, or that it is twisted upon its axis, or that it is bent upon itself, so that only the recumbent position will cure her. Tell her little. Do for her much and your name will receive a divine blessing at her hand.

Don't stuff a vagina too tightly with your gauzes, your wool or your cotton. There is nothing more disagreeable than an unnatural foreign body hereabouts.

Don't treat all female comers for some disorder pertaining to your branch, remembering that they might occasionally be afflicted with something else the other fellow can do.

Don't be narrow in your conclusions. It requires two halves to make a whole: and often more.

Don't deny any woman the right to suffer if she so disposes. If one makes her bed a hard one, she alone must lie upon it.

Don't express too much sympathy for your gynecologic applicants, should you desire to be successful. It is medicine to some but ruinous to the majority. Kindness is a different proposition altogether.

Don't inform the married patient she has specific urethritis. Ninety-nine times out of a hundred the husband will advise his wife to go to some other physician, and that you are a genuine humbug.

Don't deny the husband marital rights only when absolutely necessary. Always take into consideration a married couple is like a pair of scissors; come between them and you suffer.

Don't estimate your surgical skill by the number of ovariectomies you have done, but rather by ones you haven't done.

THE REMOTE EFFECTS OF HEAD INJURY.—It has long been recognized that injuries to the head, generally with but sometimes without fracture, may be responsible for brain abscesses appearing weeks, months or even years after the injury. The rôle of such injuries in the production of neuroses and psychoses has been universally

recognized and in some quarters greatly exaggerated. The physician who is not in touch with modern psychiatry is often too willing to assure the relatives of the insane patient of the absence of inherited predisposition and to place the blame on some injury that no one had thought of for years. It is still unsettled whether injuries to the head can cause brain tumors, but a history of trauma is obtained in a small percentage of cases, particularly of sarcoma and glioma. Another post-traumatic affection has created considerable controversy for some years. In 1891 Bollinger first called attention to the occurrence of cerebral hemorrhage weeks or months after a head injury. Recently Stadelmann has contributed several convincing cases, and Harbitz of Christiana has reviewed the whole subject in a lucid manner. As an instance of these so-called "*traumatische Spätafoplexien*" one of Stadelmann's cases may be cited. A working man, 29 years old, received a blow in the right parietal region which rendered him momentarily unconscious, but he was able to return to work in a few days. Four weeks later he was suddenly taken with convulsions, commencing in the left arm, and became unconscious. He died six days later, or thirty-four days after the injury. The autopsy revealed clotted blood in the leptomeninges of the right fossa Sylvii, with a small amount of softened brain substance underneath, and a clot the size of a pigeon's egg deep down in the right posterior central convolution; the surrounding brain substance was soft and edematous. There was also a focus of softening containing blood clots in the left frontal lobe. The course of events is supposed to be as follows: Trauma causes capillary hemorrhages, frequently surrounded by minute foci of softening, generally located in the surface of the brain beneath the contused part, but frequently also deep down around the ventricles, or in the portion of the brain diametrically opposite the injured portion. The changes produce a local circulatory disturbance causing edema, and this, together with the accompanying softening, causes a diminution in the pressure normally exerted from without on the vessel wall, and rupture is the result, occurring

either spontaneously or from some trivial cause, such as sneezing, laughing, a heavy meal or emotion. Naturally in a given case one must be extremely cautious in deciding a hemorrhage to be of this kind. Stadelmann formulated the following conditions: 1. The patient must formerly have been in good health, not syphilitic, alcoholic, nephritic, or the victim of heart disease or arteriosclerosis. 2. The trauma must have been considerable, but need not necessarily have caused loss of consciousness. 3. The symptoms of the vascular and cerebral changes must be of distinct evolution and come on within a reasonable length of time. If years have elapsed, it will be practically impossible to establish a connection. The subject is worthy of attention, particularly on account of its obvious medico-legal importance. It is highly desirable that all such cases should come to autopsy, and a careful and critical comparison be made between the clinical and postmortem findings.—*Jour. A. M. A.*

POSTURAL ALBUMINURIA.—Its characteristic feature is albuminuria on rising from bed in the morning, usually passing off in the course of the day. It is most common in boys and young men, especially those who are studying hard. It is not due to food, does not appear if the patient remains in bed to breakfast, and disappears quickly on lying down. It is obviously in relation with the erect posture after a night's rest in bed, and with imperfect cardiovascular adjustment to the changed hydrostatic conditions. The amount of albumin may be very small, but it is usually very considerable. Its recognition is important, as the treatment required is the exact reverse of the usual milk diet and protection from cold and fatigue. The most common antecedent is a neurotic family history and cardiovascular instability. The pulse varies greatly in frequency and is greatly influenced by changes of position. The violent cardiac impulse is due to forcible action of the right ventricle, the apex beat being weak, and the second sound is reduplicated on lying down. The prognosis is favorable, all the treatment usually required being good simple food, fresh air

and vigorous exercise. If these cases are treated for renal disease they usually go from bad to worse, and become confirmed nervous valetudinarians.—*Sir W. H. Broadbent in British Medical Journal.*

SUGAR FORMATION IN LIVER TISSUE PRESERVED IN ALCOHOL.—During Seegen's last illness he urged the immediate publication of this, his last work, to call attention to the discovery mentioned in the title. It modifies our previous conceptions of the mechanism of sugar formation. Since his announcement that under certain circumstances no glycogen could be found in the liver immediately after death, he has been constantly studying the subject of glycogen formation. The chopped liver of dogs was examined for glycogen and sugar at once after death and again at intervals after the liver had been set aside in alcohol. In one experiment the liver contained .9 per cent. sugar at once after death and 7.9 per cent. after having been five days in alcohol. In another the percentage was at first 1.1 and after seven days in alcohol it amounted to 7.4. The total sugar increased in like proportion. The elaboration of sugar continued under the surface of the alcohol. The theory that the elaboration of sugar is a function of the living cell is disproved by these facts. Instead of the mysterious vital forces of the living cell we must admit chemical action as a factor in the production of sugar. The action of enzymes as an essential factor in the process of elaboration of sugar is likewise excluded by these new facts. Hence the assumption that the liver sugar is derived from the liver glycogen is refuted once for all.—*Wiener Klin. Woch., Jour. A. M. A.*

METABOLISM IN PREGNANCY.—Dr. Slemons (Johns Hopkin's Hosp. Report, No. 155) reported the results of studies made on four women whose metabolism was followed for about thirty-five days. The diet was carefully regulated and weighed; all the excreta (including urine, lochia, and milk) were carefully measured and daily estimates were made of the amount of urine excreted and the total nitrogen and ammonia output. The series showed a

definite diuresis just before and just after delivery. All the cases showed a tendency of the mother to store nitrogen during pregnancy, and the case that bore live twins emphasized this tendency. The series also showed that during pregnancy there is a tendency for actual storing up of ingested fluid to take place. The ammonia excretion shows definitely that a fetus in utero causes changes in the mother's metabolism. It drops to normal after delivery and tends to become normal when the fetus dies in the womb. Relative suppression of renal activity explains the changes in the amount of excreted urine during and following labor. The diminution in nitrogen output is probably due to impairing of the kidney cells. The high ammonia output at the time of delivery cannot yet be explained. During the puerperium all the cases in Dr. Slemons' series showed a definite diuresis except the one that bore dead twins. There was a rise in the nitrogen output, usually beginning about the second day of the puerperium, and probably due to regressive changes in the mother. The ammonia fell gradually to normal. The series showed that metabolism tends to assume a non-pregnant type when the fetus dies in utero.

FACTS ABOUT CANCER.—Great importance is attached to two recent discoveries concerning cancer. The first of these is the discovery of the existence of cancer in fishes, as in man and other warm-blooded animals living in similar conditions as man. It is hoped that the fact that cancer exists in fishes which live under such different conditions than man, may narrow the necessary field of observation and thus conduce to a more speedy and complete knowledge of the disease.

The other discovery was that of Profs. Farmer, Moore and Walker. This does not promise an immediate cure or prevention, but is acknowledged to be of the highest importance. At present its practical value is diagnostic. It enables a distinction readily, even easily, to be drawn between malignant and benignant growth at the same time.

The fundamental importance of the discovery must not

be discounted. Heretofore the most terrible thing about cancer has been the ignorance of the causes of its birth and growth. A microbe parasite has been suggested, but failed completely to justify the theories founded on the assumption of its presence.

Another theory which has been accepted generally of late has been that cancer is the untimely growth of an embryonic tissue—that is, a tissue which had existed in the body stationary and undeveloped since some previous stage. The body's evolution from its embryo had started it into activity, and it developed at a furious rate in an entirely wrong way. Prof. Farmer and his colleagues have now established the nature of the cancer cells, the method of their growth, the possible connection of this growth and the irritating causes which provoked it, incidentally showing that cancer cells are not a development of the embryonic tissue.

It is difficult to explain the discovery briefly, but the central point is the establishment of the fact that the cancer cells are cells which under some kind of irritating stimulus behave not as ordinary cells, but as if they were cells of the reproductive tissue. The process observed during the development makes it easy to tell if a cell is malignant cancer. Research, therefore, has a new field of observation in finding what agents of irritation are causing an ordinary cell to act the same as cells of reproductive tissue.—*Daily Medical*.

THE CAUSE OF EPILEPTIC CONVULSIONS.—It has been supposed that there is a slight chemical change in the gray matter of the cerebral cortex, rendering it very unstable. If, now, the gray matter holds in store a large amount of nerve energy, an epileptic fit may be caused by a sudden and violent discharge of this nerve energy, either with or without a stimulus. Another recent theory is that advanced by Krainski. He found that the output of urea is greatly diminished for a day or more before the occurrence of a fit. In this disturbed metabolism the system is supposed to form ammonium carbonate instead of urea. This compound gives off ammonia, and Krainski believes that the

epileptic fits are caused by the ammonia, but this view is contradicted by other authorities. We are, therefore, still very much in the dark concerning the nature of this disease, but it seems that much new light may be thrown on it by experiments. This has recently been attempted, and the results reported are both interesting and encouraging. Mott and Halliburton showed several years ago that the blood, and especially the cerebro-spinal fluid of patients suffering from degenerative diseases of the central nervous system, such as epilepsy, combined sclerosis, disseminated sclerosis, etc., contain considerable quantities of cholin ($C_6H_{15}NO_2$). This substance, which is of the nature of an alkaloid, is believed to be split off from lecithin, which in turn is derived from the medullary sheath of the nerve fibers during the process of degeneration. Donath has repeated and verified Mott and Halliburton's observation and come to the conclusion that cholin may be responsible for the convulsions of epilepsy. He examined for cholin the cerebrospinal fluid of 18 cases of idiopathic epilepsy, with 15 positive results; of 3 cases of Jacksonian epilepsy, with 3 positive results, and of many cases of locomotor ataxia, paralytic dementia, brain syphilis and brain tumor, with positive results in nearly 90 per cent. of the cases. By injecting a solution of cholin into the cerebral cortex of animals he was able to produce both localized and general convulsions, which sometimes ended in paresis of groups of muscles. No such convulsions were caused by the injection of salt solution of various concentrations. It would seem, therefore, that epilepsy may be a kind of auto-intoxication, and that the convulsions are caused by a definite chemical substance which is formed in the central nervous system by the degeneration of some of the nerve elements.

THE EARLY DIAGNOSIS OF ARTERIOSCLEROSIS.—Alfred Stengel, Philadelphia (*American Medicine*, January 2, 1904): Among the early symptoms are a change of vigor and of color, and various trivial evidences of reduced vitality. These are especially marked when the myocardium is

the first of the organs to suffer. When the patient has been an active man of marked energy and vitality, the change may be pronounced and not rarely it is first noted after some special strain or shock. He lays special emphasis upon the importance of the nervous system in the development of the disease. A sudden shock does not, indeed, initiate the malady, but rather render its effects more pronounced and perhaps hastens its progress, but continued nervous strain, especially when combined with anxiety and irregularities of life, undoubtedly is a contributing cause of arterial disease of greater significance than we usually believe. It is active men of the better class, men who have achieved much and suffered much, though outwardly most successful, that fall early victims to the disease. The easy going, luxurious, and indolent may develop the disease, but not often prematurely and pathologically except as a result of especial excesses. With loss of vigor comes a change of color, a pallor, trifling perhaps at first, but later more and more pronounced. This is most conspicuous about the face, and especially around the mouth, temples, and eyes. In the later stages there is a false appearance of anemia that the experienced readily recognize as the arteriosclerotic facies. The pallor is due to the narrowed arterioles and capillaries, not to impoverished blood.

At this stage, too, the skin is frequently altered in the activity of the sweat glands. While it is as a rule dry, and later becomes persistently so in most cases, in this early stage there may be a marked tendency to occasional sweating, abnormal sweating under exertion, and the like. This may be in part the result of general lowering of vitality. In a measure, however, it is a direct vascular and vasomotor phenomenon.

Somewhat of the same sort is the allied renal action seen in many cases of early arteriosclerosis. In the first place, increase in the total amount of urine antedates any actual disturbance of equilibrium of renal action, a tendency to alterations of polyuria and reduced excretion, and to wide variations in the specific gravity of the urine, with or with-

out marked changes in quantity. The morning urine may show a gravity of 1,025, and the evening urine one of 1,005 to 1,010.

Later, occasional or continuous slight albuminuria makes its appearance and is as a rule significant of quite advanced arterial disease. There are, however, instances in which it occurs before renal changes are marked and in the majority of cases repeated examinations may disclose the occasional appearance of albumin in the urine. Casts are not often found till the kidney has become considerably affected, but cylindroids may be discovered much earlier.

When the heart muscle is affected there may be slight symptoms long before the myocardial disease has been pronounced. Arrhythmia, increased force of the apex impulse and suggestions of dyspnea, are the most important of these.

Finally Stengel calls attention to the possibility of an early diagnosis by ophthalmoscopic examination. Thickening of the retinal arteries is evidenced by the high light of the arterial image and the compression of the veins where the arteries cross them. Attention has been called to these conditions by de Schweinitz, and in a number of cases he has found these ophthalmic peculiarities very early in the course of the disease.

AMYOTROPHIC LATERAL SCLEROSIS.—In the *American Journal of the Medical Sciences* for June, 1903, Joseph Collins writes an exhaustive article upon amyotrophic lateral sclerosis, and after summarizing the pathological findings in a case which he reports, says of the disease: "Amyotrophic lateral sclerosis is a disease characterized by the symptoms of progressive muscular atrophy of the Aran-Duchenne type, complicated with bulbar involvement, plus spastic paresis, particularly of the lower extremities and exaggeration of the tendon jerks all over the body. The morbid process upon which it is dependent consists in a decay of the peripheral motor neurons in the ventral horns, the terminal aborizations of the central motor (in other words, the ending of the neuraxons that come down through

the cord as pyramidal tracts), and of the pyramidal tracts themselves, and atrophy of column (strange cordonal) and commissural cells of the gray matter. The degeneration extends centrifugally in the peripheral motor neurons, centripetally in the central motor neurons. This constitutes, when the process is complete, a characteristic microscopic picture, the principal features of which are: (1) Atrophy of the anterior horns and diminution or disappearance of all its cell constituents without noteworthy change in the blood vessels; (2) degeneration of the fundamental tracts of greater or less extent, and (3) degeneration of the pyramidal tracts, which may be so slight as to be scarcely detectable, or so complete that it may be traced to the origin of these tracts in the motor cortex. The question whether the peripheral motor neuron (*i. e.*, the root cells of the anterior horns) or the central motor neurons (the pyramidal tracts) are the first to be involved cannot yet be answered."

Speaking further as to the etiology, he says: "Amyotrophic lateral sclerosis has, in the main, the clinical features of an active destructive disease, not a decay." And further: "Although I am willing to admit prenatal influences, there must be some more tangible and actively operative cause. It is not unlikely that we must look to the pathological chemist for the discovery of the real noxious agency."—*Charles W. Hitchcock, Abstract in Medical Age.*

THE CURE OF DIABETES.—There has for long been simmering in the minds of experimentalists a conviction that diabetes should be included in the list of curable diseases. It has been thought that if the glycolytic ferment could be brought into practical control it would afford the means of overcoming the glycosuria which results from the suppression of its activity in the organism. Nearly four years ago Blumenthal tried to cure diabetes by means of subcutaneous injections of pancreatic juice. The results were negative, for the reason, as the experimenter believed, that the quantity which could be injected was too small. Since then efforts have been made to isolate the glycolytic ferment from organic secretions. That which is obtained from the pan-

creatic juice is not soluble in water, and if this ferment is anywhere to be found soluble in water it is probably in the fibrin.

Although Blumenthal's efforts to secure this glycolytic ferment have heretofore been unsuccessful, he seems to have established a base from which much investigation can proceed. When we have secured a ferment capable of counteracting glycosuria the treatment of diabetes will be on a scientific basis. The hope of this is not ill-founded. It is now known that this ferment is not only contained in the pancreas, but likewise in the liver, the spleen and lymphatic glands. It is known that it does not act directly, but needs the intervention of a second enzyme for its activity. Its physiology resembles the processes of immunity. There probably exists a specific body holding the glycogen or the sugar represented by the glycolytic ferment, and there may exist a second enzyme body which acts as its complement, and this exists specifically in the pancreas and in minor quantities in muscle secretion. Although the pancreas appears to be the real source of the glycolytic function, it is more or less the property of the entire organism. If we assume for some reason glycolysis does not take place through functional disability of the pancreas, it would certainly introduce the opportune ferment. So that diabetes, which has been the synonym of an incurable malady from a scientific standpoint, can no longer be regarded as such. It is sooner or later to yield the secrets of its baleful potency to the indefatigable efforts of the investigator. Find the right ferment, as in gastric dyspepsia, and appeal to the vagus.—*Editorial in Medical Age.*

"PHYSIOLOGICAL ECONOMY IN NUTRITION, with Special Reference to the Minimal Protein Requirement of Healthy Man," was the subject of an interesting paper read before the National Academy of Science meeting at Washington, D. C., last April, presented by Prof. Russell H. Chittenden, director of the Sheffield Scientific School of Yale University. He described in detail the experiments carried on by him on a number of students and a squad of

United States soldiers and found at the end of six to twelve months—varying with the different subjects—that he had been able to effect a gradual reduction of meat and other proteid foods with little if any increase in starch and other foods and that the weight of the subjects was almost exactly the same as when the experiments began. Their bodily vigor was greater and their strength much greater, the latter due, however, to the regular physical exercises which they practiced. His conclusions were therefore that the average healthy man eats from two to three times as much as he needs to keep him in perfect physical and mental health and vigor. Prof. Chittenden said that so far as he himself was concerned he found his health greatly improved by eating only two meals a day, eliminating entirely his breakfast.

NEUROPATHOLOGY.

POST-MORTEM FINDINGS IN LANDRY'S PARALYSIS.—Theodore Diller reports a case in *American Medicine*, May 7, 1904, on which Wm. G. Spiller made the below detailed postmortem:

The man was a salesman, aged 37, was admitted to the Allegheny General Hospital September 2, 1903. He had been a "hard drinker." Eight weeks before admission he complained of weakness in his legs and began to use a cane. This weakness steadily increased, and the patient, after a few days, was compelled to take to his bed. After he had been in bed about one week he complained, for the first time, of sensory symptoms—pain and tenderness in the back and about the chest, abdomen and legs, and, to a less degree, in the arms. In the meantime he had steadily continued to lose strength in the legs, and impairment of motion in the arms had also become apparent.

Ten days before admission the patient suffered an attack of "gagging and smothering," and since then similar attacks have frequently recurred. There was no loss of control over the sphincters until the night before admission, when involuntary discharges through both occurred.

On admission his legs were almost completely paralyzed. By the greatest effort he was able to execute only slight movements in his toes. His arms were very weak, although he retained more power in them than in the legs. Double wrist-drop was present, and the grasp was very feeble. He was able to contract feebly the muscles about the shoulders. No atrophy was apparent. Hyperesthesia was present all over the body, including the face. Pressure over the extremities was painful. Tactile sense was everywhere present. The mind seemed unclouded.

The patient's condition steadily declined (muscular paralysis of the extremities becoming complete) until September 7, on the evening of which day he died, apparently of respiratory failure. The patient's mind was clear except during the twenty-four hours preceding death, and during this time it grew increasingly cloudy and delirious. For a few hours before death he was in a condition of stupor.

When examined a few hours before death the patient was cyanotic, respirations were of the superior costal type, and were very laborious and shallow; the diaphragm was apparently paralyzed, for the abdominal movement was slight.

An autopsy was performed about six hours after death. The brain and spinal cord were removed. In the former a moderate degree of congestion of the pia was noted. It contained several small hemorrhages. The cord appeared normal. Portions of the left sciatic and ulnar nerves were removed from the thigh and upper arm respectively. The liver was enormously enlarged—to four times its normal size. It was rather soft and of a dark mahogany color.

Several cultures of the cerebrospinal fluid were made in different media. These were subsequently made by Dr. R. G. Burns, who reported the presence of *Staphylococcus pyogenes aureus* in all of them.

The brain, cord and peripheral nerves were at once placed in a 5 to 10 degrees solution of formaldehyde, and a few days later they were sent to Dr. Wm. G. Spiller, of Philadelphia, who furnished the following report on October 9, 1903:

"The posterior roots of the lumbar region do not stain as well as the anterior roots, by the Weigert hematoxylin method, but this may be because formalin was used in the hardening fluid, as this interferes with the staining of the roots by the Weigert hematoxylin. The posterior roots appear to be normal when they are stained with acid fuchsin. The white matter of the spinal cord does not appear to be degenerated, as shown by the acid fuchsin and Weigert hematoxylin stains.

"Sections stained by thionin show much alteration of the nerve cells in the anterior horns of the lumbar region. Many of the nerve cells of the anterior horns show central chromatolysis, and some have their nuclei peripherally situated, a condition described by Marinesco as 'reaction at distance.' The left sciatic and ulnar nerves are partially degenerated, as shown by the Weigert hematoxylin and Marchi methods. The alteration is that of multiple neuritis." Dr. Diller reports a second case, on which no autopsy was made.

THE BRAIN AND SPINAL CORD IN HEREDITARY ATAXIA.—Some of the important clinical features of hereditary ataxia are summarized as follows by Sanger Brown:

Hereditary ataxia is a disease which may be traced through several—at least four—generations, increasing in extent and intensity as it descends, tending to occur earlier in life and to advance more rapidly. It usually attacks several members of the same family. It occurs most frequently between the ages of 16 and 35, but it may begin as early as 11 and as late as 42. It shows no marked preference for sex, but it descends through females four times as frequently as through males. . . . There is always considerable inco-ordination of all the voluntary muscles and a sluggishness of the movements they produce when the disease is well advanced. This is usually noticed first in the muscles of the legs, but in a few months or years it extends. . . .

The anatomic changes in a disease so peculiar as this, with such remarkable hereditary tendencies, naturally arouse great interest. We have now recorded by Barker* full de-

*The decennial publications of the University of Chicago, 1903, x.

scription of the brains and cords of two brothers (in the family studied by Sanger Brown) dead, of this disease, and the following are some of the most important changes: In both cases the brains and cords were relatively small. Microscopically degenerations were found in gray and white matter of cord, medulla and cerebellum. The degeneration involved the cells and fibers of certain centripetal paths (dorsal nucleus of Clarke, direct cerebellar tract of Flechsig into the restiform body, and a system of exogenous fibers corresponding to the third fetal system of Trepinski, dental nucleus of cerebellum, inferior olivary nucleus of medulla oblongata). One other case of this same family has been studied histologically by Adolph Meyer with, in general, identical results. These reports make it clear that the morbid changes in the members affected in the family described by Sanger Brown are quite constant, the same neuron systems being involved, but to the next question, namely, why are these symptoms picked out, medical science as yet can give no answer.—*Abstract of Editorial in Jour. A. M. A., April 30.*

NEUROSURGERY.

TRIGEMINAL NEURALGIA TREATED BY INTRANEURAL INJECTIONS OF OSMIC ACID.—In the *Lancet* of November 4, 1889, Bennett reported ten cases treated by his method, with most gratifying results in all. The technique of the operation, as given by Bennett, is as follows: The nerve is exposed through a small incision about a half inch in length, directly over its foramen of exit. The nerve is elevated by means of a blunt hook, and from five to ten minims of a fresh 1.5 per cent solution of osmic acid injected directly into its substance. An ordinary hypodermic syringe and fine needle are used, and the solution injected in several different places, to be sure that every fiber is reached. After this is accomplished, a small amount of the solution is injected between the nerve and its sheath in the bony canal. During the procedure a small pledget of cotton is held around the needle to absorb the

excess of solution which regurgitates and to protect the skin. The local action of the osmic acid on the terminal nerve filaments exposed in the wound is probably beneficial, so a small amount of it should be allowed to come in contact with them. After the injection is completed, the incision is closed with horse-hair or catgut suture; primary union follows, and healing is not interfered with by the action of the acid upon the tissues. The *modus operandi* of this procedure is at the present time not definitely understood. The acid probably acts in one of two ways, or possibly in both: first, by producing a degeneration of the nerve on the proximal side of the injection, toward the ganglion; or, second, by causing a local destruction of the nerve and its terminal filaments. The former seems the more likely explanation of the two.—*John B. Murphy, in Journal A. M. A., September 22, 1903.*

GLYCOSURIA AND DISEASES OF THE EAR.—In an article upon the above subject in *La Tribune Medicale*, Dr. Frey says that glycosuria of nervous origin being so well known and long recognized it is of interest to inquire if complicated purulent otitis might produce the same symptom. The fact seems proved by the following case:—

A patient was operated upon by Politzer for a cholesteatoma of the mastoid. The day after the operation there were cerebral symptoms which occasioned a second intervention. The middle cerebral fossa was opened by the trephine, but nothing was found. Opening into the sinus revealed the presence of fungosities and abscess of the cerebellum. On the same evening the respiration was slow, the pulse unequal, and sugar appeared in the urine. The glycosuria persisted for six days. It then disappeared, as well as the other bulbar troubles, and the patient recovered.

There had been no sugar in the urine at the time when the patient entered the hospital, and the glycosuria disappearing while wounds were being dressed, there is nothing to oppose the supposition that it occurred under the influence of the cerebellar abscess. There could, in fact, be

no question here of toxic glycosuria, which is slight and transitory, and develops in the course of febrile affections, as pneumonia, erysipelas, etc.

Four of the cases reported by Grunert showed pus in in the neighborhood of the fourth ventricle. That the fourth ventricle was equally interested in Frey's case seems logical to believe, especially in view of the disturbances of respiration and circulation. (It is known that the ganglia of the pneumogastric are situated below the fourth ventricle.)

To complete a clinical picture which was already of the clearest, but of which the exact nature of the lesions escapes identification: There could not have been an eruption of pus into the ventricle. There is no instance of leptomeningitis, even when localized, being cured, and moreover, at the operation there was no trace of deep fistula. The abscess was entirely encapsulated in the substance of the cerebellum. As the bulbar symptoms and the glycosuria did not occur until after incision of the dura mater, we cannot impute them to the compression which this variety of abscess, covered as it is by the tentorium cerebelli, exerts upon its vicinity.

The most simple explanation appears to be that, the abscess being opened, the surrounding zone had reacted, either spontaneously or under the influence of the operative traumatism, by an exudation or œdematous infiltration sufficiently large to involve the floor of the fourth ventricle.—*Shoemaker's Medical Bulletin.*

NEUROTHERAPY.

LUMBAR PUNCTURE IN UREMIA.—Seiffert has had extensive experience with lumbar puncture in uremia and has invariably found that the cases thus treated all recovered. In less than half an hour there is an amazing improvement in the condition. In his cases the uremia was due to scarlet fever. Lumbar puncture might prove equally effective in uremia from other causes, especially in eclampsia, but he

has had no opportunity to give it a trial. He found the procedure a life-saving measure also in the initial convulsions of scarlet fever and of measles, although his experience with such cases has been limited. Even while the puncture was in progress consciousness returned and the convulsions ceased. It was impossible for him to test the cerebrospinal fluid obtained in these cases to learn whether it contained a specific toxin for animals.—*Wiener Klin. Woch. Jour. A. M. A.*

METAL DISEASES.—Certain metallurgists in Germany have come to the conclusion that metals are capable of being infected with diseases. A leading scientist, Prof. Heyn, has found that the injury done to copper from overheating the metal is poisoned with what he calls copper protoxid, a disorder which causes sickness and structural weakness. Steel that has been poisoned by hydrogen is deteriorated until it becomes almost as brittle as glass. Another scientist has discovered a certain kind of tin pest which inhabits roofs. He found also that when the diseased metal was brought into contact with healthy tin the latter soon became infected and was finally destroyed.—*Medical Times*.

NERVE SUTURE AND NERVE REGENERATION.—Dr. P. B. Henrickson, in the *Lancet*, states that a nerve when divided will lose its motor conductivity only after the lapse of some time. Regeneration begins immediately after the division of the nerve and takes place hand in hand with degeneration, so that after a short time—seven days—long threads are found that by and by are developed into active nerve fibres. After the thirtieth day in the rabbit there is found an advanced development of the myelin sheath in the newly formed fibers of the peripheral part. At the same time may be observed motor power and later an increase in muscle weight. After the lapse of some time there is found electrical reaction. Experiments on animals show that a divided nerve unites equally rapidly whether it is sutured or not, but the reason why suture ought not to be omitted is that circumstances sometimes arise which prevent the union and

function of the nerve; for instance, infection leading to the formation of dense scar tissue. The nerve fibers grow out with most activity in the first few weeks, and after union occurs it will be rapidly succeeded by recovery of sensation. If sensation does not return, or if it is incomplete, or is proceeding slowly at the time when scar tissue has been formed, it must be taken as an indication that serious obstacles to the union of the nerve are present and that complete restitution cannot be expected without operation. Sensation, therefore, is of the greatest importance from a diagnostic and prognostic point of view.

PREPARATORY COURSE FOR NURSES' TRAINING SCHOOLS.—The American Society of Superintendents of Training Schools for Nurses is in favor of increasing the amount and raising the standard of instruction given in these studies auxiliary to the strictly professional training given in the hospitals, and believes that this scientific knowledge could be more advantageously acquired independently of the professional work. Hence, a preparatory course of training in the scientific branches should be provided. At the solicitation of Dr. S. Weir Mitchell and the superintendents of the leading Nurses' Training Schools, Philadelphia, the Drexel Institute has undertaken to organize such a preparatory course of instruction. The Institute has all the necessary facilities in the way of laboratories, lecture rooms, class rooms, school kitchens, apparatus and appliances, and all the additions necessary for this new course of instruction and training will be liberally provided.

James Mac Alister, LL. D., is President of the Institute, with a staff of professors of anatomy and physiology, chemistry, materia medica, domestic science and economics, bacteriology, English language and literature, vocal expression, gymnasium exercises.

ALCOHOL IN SURGERY.—By Pearce Gould, M.S., M.D., F.R.C.S., Surgeon to the Middlesex Hospital, England.—For many years I have dispensed almost entirely with alcohol as an aid in surgical treatment. As a student I saw

it used almost as a matter of routine for every kind of surgical malady except head injuries, and in my early years I naturally followed the practice of my teachers, but as soon as I made trial for myself of the effect of withholding alcohol, I found how entirely overrated its value was, and how gravely mistaken had been the teaching. It is commonly held, I believe, that alcohol stimulants are of special value in all forms of septic inflammation, such as erysipelas, pyæmia, septicæmia and hectic fever. I believe that this belief is founded solely upon tradition unsupported by any trustworthy evidence, and untested by experiment or experience. Where alcohol is always given its value cannot be estimated; a right judgment can only be arrived at by the comparison of cases in which it is given with those in which it is withheld. Having made this experiment, this comparison, I have no doubt whatever that not only are there no cases that require alcohol so little as the septic cases, but that there are few in which its influences are so wholly harmful. It has seemed to me that its effect is to dry the mouth, fur the tongue, cloud the intellect, lessen the ability to take, digest and assimilate food, and to do nothing to lessen the tissue waste, to increase the elimination of poison, to maintain the strength of the heart, or to arrest the disease.

The results of experiments on animals exactly agree with the clinical evidence.

Abbot, in the *Journal of Experimental Medicine*, New York, 1896, records the results of his investigations. The animals were rabbits. He first of all gave ethylic alcohol in doses sufficient to produce a more or less deep intoxication, and repeated this for a varying length of time until the animals were alcoholized. These rabbits, as well as certain control rabbits, were then inoculated with cultures of (1) streptococcus pyogenes (erysipelas), (2) staphylococcus pyogenes aureus, and (3) bacillus coli communis. The alcoholized rabbits showed the effects of inoculation considerably earlier than did the control animals, and in the case of streptococcus infection the miliary abscesses were more numerous and larger, as well as earlier in making their ap-

pearance. In other words, the alcohol had the effect of diminishing the resistance of the organism to the pathogenic bacteria. It seems to act by diminishing the alkalinity of the blood, and by exciting a negative chemiotaxis, thus lessening both the bactericidal power of the blood plasma and the phagocytic action of the white corpuscles.

Deleardi found that rabbits inoculated with anthrax are much more susceptible if they first receive a dose of alcohol. He states that it is almost impossible to produce any high degree of immunity against anthrax, tetanus or hydrophobia in animals to which alcohol is being simultaneously given. He mentions also the interesting fact that there is a greater susceptibility to hydrophobia among those who take alcohol, and that the Pasteur treatment has been found to be more successful in the nonalcoholic than in the alcoholic patients. To quote his own words: "One sees that the elements which are called into play in the production of immunity, whatever they may be (and one thinks immediately of the leucocytes), are influenced above all when one causes to act simultaneously on the organism alcohol and the microbe, or its toxine."

Earlier than this Doyen pointed out that defect in the acidity of the stomach contents and gastro-intestinal troubles are the conditions favorable to the development of cholera, and his experiments with alcohol showed that it was able to produce both of these unfavorable conditions, and in this fact he found the explanation of the frequency and gravity of cholera in those addicted to alcohol.

Sims Woodhead asserts that alcohol diminishes the alkalinity of the blood, and hence decreases its bactericidal power.—*Journal of Inebriety*.

RECREATION PIERS IN NEW YORK.—At the foot of East Third street, opened to the public on June 19th, is a pier 300 feet long, 60 feet wide, and cost \$4,000, and there are three others, one at the foot of Twenty-four, and One Hundred and Twelfth streets, East River, and at the foot of Christopher street, North River. Such provision for the resort of mothers and children during the hot days of sum-

mer is a happy idea and a wise expenditure of funds. The cool refreshing air which circulates along the river front with the incoming tide can thus be enjoyed by thousands to whom a day excursion on one of the charity barges is impossible on account of household duties. St. Louis, take notice.

LONDON SEWAGE.—The sewage of the largest city in the world—London, is handled by two main pumping stations on each side of the Thames, with machinery of an aggregate of 3,000 horse-power, capable of pumping some five hundred million gallons per day, and a like number of storm-water pumping stations, capable of pumping directly into the river 150,000,000 gallons per day—the latter being used for preventing flooding in the lower parts of the metropolis when a heavy fall of rain occurred at or about the time of high water, when the storm outlets were closed by the rising tide. The out-fall works for the purification of the sewage, the dry-weather flow of this exceeding 200,000,000 gallons per day, consists of settling tanks and their accessories for the chemical treatment of the sewage and the means for removing the sludge produced to the ocean. The tanks at Barking are rated at 20,000,000 gallons, and those at Crossness at 31,000,000, the sludge, amounting to more than 2,000,000 tons, being discharged into the open sea at a distance of about fifty miles from the works by a fleet of steamers.

HUMAN IMPROVEMENT AND RACE CONSERVATION.—Dr. Alexandér Hugh Ferguson, Professor of Clinical Surgery, Medical Department Chicago University and Chicago Post Graduate, in his presidential address before the Tri-State Medical Society at Hannibal, Mo., April 2, 1903:

The medical profession gains more knowledge of man, physically, intellectually and morally, than do those philosophers who write at great length on sociology, and yet the doctor has not enriched the world with a better philosophy, for he has been kept too busy at conserving the individual. In order to improve humanity some thought must be given to race culture, first from a physical standpoint, and then from the view-point of intelligence and morality. It

is clear to me that this must be done by us. The generative stream is to be changed to improve man, not by what we call "natural selection," but by a prophylaxis against retrograde metamorphosis. The process of regeneration is, of necessity, one of healthy generation. Like begets like, and must always do so. We Caucassians are the pale-faced duplicates of our progenitors, and our progeny will be a repetition of the past. The fundamental class of heredity have been, and no doubt will be, the same as they are today. Any physical change in form and mentality to improve man must be selected by man according to scientific environments, for he is the unrivaled reformer of the universe. The discrimination in favor of bringing fitter elements of reproduction together will be rational and conscious. Let us set ourselves to work to raise and develop a different type of bipeds than we see nowadays occupying some places. Let us apply some of the principles that have improved the equine, and bovine, to the hominine species. It is true that by the blindfold selection of infatuation, fair women and brave men have been and are now produced, but by a scientific selection we hope to develop more good, pure women, as well as strong and profound men. It is safe to say that upon the character and rigidity of the marriage discriminations will depend the impending millenium.

The true status of affairs is to be distinctly and profoundly realized, and from the darkness will come the spark of illumination. Sociologic processes are the natural followers of biologic changes. All must come through the gateway of the womb. It is not more babes the world needs, but more of a particular kind of babes—those free from congenital defects, hereditary diseases, and tendencies thereto, and babes of genius and virtue. What use have we for innane brats that can only travel to a degenerate maturity by the aid of the doctor? None whatever. Why should criminal blood be injected into posterity? Why should drunkards, kleptomaniacs and moral degenerates be licensed to produce deficient beings like themselves? Tell me why a fool should propagate an idiot? Is there any legerdmain of

logic that justifies society to allow a hypochondriac to curse his progeny with wretchedness? Let me ask what are a man's obligations to the future? Are they to give more consideration to plants, flowers, dogs, cats, horses and pigeons than to rearing high-minded and strong-bodied boys and girls? Not at all! Malfectives should no longer be produced, for they are only the sad survivals of an inglorious evolution forced upon humanity by the careless flotsam of a capricious heredity.—*Medical Fortnightly*.

HYDROCHLORIC ACID IN EXCESS.—Dr. Wm. Russell (*Brit. Med. Journal*) says this is a much more common cause of dyspepsia, and ultimately of gastric dilation, than is usually recognized. It is the common condition in cases of nervous indigestion. The unconscious comfort or the conscious uncomfot of digestion depend upon starch digestion, arrest of starch digestion or proteid digestion. There ought to be no more gastric juice poured out than can satisfy the needs of the proteid; if, after the proteid is satisfied, the gastric juice is continually secreted, the hydrochloric acid which is poured into the stomach is the disturbing factor which produces the symptoms. This causes a considerable portion of the finely divided starch food, and the fat of milk, to be retained in the stomach, this retained starch causes further secretion of the gastric juice. The undigested starch is ultimately passed on, but only after it has produced much discomfort and in some instances caused vomiting. Permanent cure can be accomplished by the use of a dietary in which these proteids which are easy of digestion are reduced to a physiological minimum, in which starches that are used are as much changed as possible, and above and instead of all, by the use of bovine blood.

NEW HOSPITALS FOR THE INSANE.—Nearly a million and a half dollars is now being spent, or is about to be spent, in some nine different States for new buildings for the insane. This is exclusive of New York State, where between \$600,000 and \$900,000 is annually expended for this purpose. It would seem pertinent to inquire whether there might not be an increase in efficiency and decrease in

cost if the experience of the different States were in some way made available to one another. There is practically the same class of patients to be provided for in all cases, and there is little reason why buildings which have been found suitable in Massachusetts should not be found suitable in Oregon. The building operations now under way, or already planned, include entirely new institutions at Norwich, Conn.; Allentown, Pa.; and Parsons, Kan., and additions to existing buildings at Morristown and Harrisburg, Pa.; Spring Grove and Sykesburg, Md.; Dunning and Watertown, Ill.; Lyons View, Tenn.; Hopkinsville, Ky.; San Jose, Cal.; Eloise, Mich.; Las Vegas, New Mexico; Norfolk, Neb., and Pineville, La.—*Charities*.

THE THENELLES "SLEEPER." Lanceraux—La dormeuse de Thenelles. Un sommeil pathologique de 20 années consécutives.—*Bulletin de le Academie de Medicine*.

The Journal A. M. A. mentioned last June the death of Marguerite B. of Thenelles, France, who had passed twenty years in a pathologic sleep. In May, 1883, after a severe fright, she fell asleep and did not rouse until in May, 1903, when symptoms of progressing tuberculosis seem to have recalled her to life for a few days, after which she succumbed to her tuberculosis. Her father was alcoholic, her mother and sisters neurotic. The various features of her long sleep confirm Charcot's dictum that the sleep of lethargy is only a modified hystero-epileptic attack. When she roused she spoke the dialect of her childhood, but there were no signs of impairment of the nerve centers nor of the peripheral nerves and she took nourishment normally. During her trance she had been fed by the rectum. Her lethargic sleep had been accompanied every four or six weeks by sudden convulsions, each terminating by copious salivation or by a profound sweat. Her unconsciousness was never relieved and no signs of intelligence were apparent during the twenty years of her sleep. A small hysterogenic zone was found at the upper part of the sternum; the slightest touch to this region elicited convulsions. Otherwise there was general anesthesia. The case is reported by Dr. F. Charlier of

Origny Sainte Benoit (Aisne), and Lancereaux reviews a number of other cases resembling it to a certain extent, although in none on record did the trance last so long. There is no danger of any one's being buried alive in a trance as the temperature alone is sufficient to show the difference between the condition and death, even without the absence of signs of putrefaction. The hysteric trance has never proved fatal in itself, but the lethargic sleep connected with melancholia entails a much graver prognosis as, for instance, in Semelaigne's case, in which after fifteen months of the trance the subject's face suddenly became congested, the respiration and pulse more and more hurried, and death replaced the pathologic sleep without the intervention of a gleam of consciousness. Hypnotism, electricity and other agents have proved powerless against these trances, but if, as has been suggested, they are due to ischemia of the brain, remedies against this should certainly be tried. As a rule, however, hysterics are best treated by being left alone. Instead of making a great ado over their seizures he advises the family to leave them entirely alone and quit the room, and has never had a second attack occur among patients thus treated. Raymond remarked in the discussion that he frequently had occasion to see subjects in such trances. Every month on an average one is picked up in the streets and brought into his service. He rouses them by moving the limbs, with other mechanical measures to arouse the benumbed psychic centers.

CLINICAL PSYCHIATRY.

AN EXTRAORDINARY MEMORY.—At the Giessen Congress on Physiology Prof. Mueller of Goettingen told of a certain Dr. "K" who within a few seconds was able to work out the squares of any number of five figures given to him. He was also able to learn by heart and repeat a row of figures 204 in number within twelve and a half minutes. Prof. Mueller asserted that no such memory for figures had ever been known, the record having been 204 figures in seventy-five minutes.—*Associated Press Report.*

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

THE AMERICAN YEAR BOOK OF MEDICINE AND SURGERY for 1903, edited with signal ability by George M. Gould and that capable corps of collaborators, Baldy, Brown, DaCosta, Dorland, Fetterolf, Gibbon, Gibney, Hamann, Hirst, Kyle, Pyle and Waterman, is again on our review table.

This excellent "yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery," needs no further comment from us than the naming of its collaboratorial sponsors.

The contents of this valuable year book are made up from current observation, discovery, experiment and opinion, as gleaned from the text-books, journals, monographs of the leading American and foreign authors and investigators of the day, by master minds, whose hands are deft at gleaning. No body of chefs could better prepare dishes for critical gastronomic tastes, than these gentlemen have collected from current medical literature intellectually palatable professional viands.

The diseases of the brain and nervous system is an especially readable review beginning with Darantes' observations on cerebral localizations, continuing with Mills' always authoratative presentation of brain tumors, Madison's contribution to the subject, Grant Andrews, on cerebular abscess, McCasky and Porter on other brain abscesses, Ballances' discussion of lateral sinus thrombosis, Nadsons' gangrenous destruction of the pituitary body, Cutts' endymitis, in an, infant with convulsions, Shield and Shaw * on linear cranial fracture, Bullard and Dwight's operative indications, Newman's head injury motor aphasia, Dennis' intracranial tension, operative indications, Posts'

head injury records, Monro's surgical treatment of haemorrhagic pachymeningitis, Schaefer's instrument for brain protection under craniotomy, Chalmers DaCostas presentation of Steelwagen's new trephine, Bartlett's surgical anatomy of the cranial fossa, Murphy and Neff, Frazier and Spiller on surgery of the Gasserian ganglion and Robert Abbe on the same, the two Ballances and Purves Stewart on intractable facial paralysis, Cushing, Fause and Faset, on surgical treatment of this paralysis by anastomosis, Cotton and Allen on post anæsthetic paralysis, Kennedy on birth paralysis, Hendrickson on nerve suture and regeneration, Moyer on surgical relations of traumatism of peripheral nerves and Bowlby on primary nerve suture. Bloodgood on angioneurotic erythema closes this interesting and valuable review.

Of similar value are other portions of this work, for which we have not reference space.

W. B. Saunders, Philadelphia, New York and London, are the publishers.

EPILEPSY AND ITS TREATMENT. By William P. Spratling, M. D., Superintendent of the Craig Colony for Epileptics at Sonyea, N. Y. Handsome octavo volume of 522 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, \$4.00 net.

This work by Dr. Spratling is of unusual interest for many reasons: It is the first complete treatise on epilepsy appearing in this country since the appearance of Echeverria's work published over 33 years ago, and represents the practical experience of Dr. Spratling as superintendent of the Craig Colony for Epileptics at Sonyea, N. Y., during a period of ten years. The great progress made in the knowledge of epilepsy and its treatment during the past fifteen years certainly demanded an accurate and careful work which would include these latest advancements. Dr. Spratling has given us all that could be desired. Of particular interest are the chapters on Psychologic and Medico-legal aspects. An entire section is devoted to the all-important seizure type—Status Epilepticus; and the treat-

ment, general, educational, medical, and surgical, is discussed with wisdom, thought, and conservatism. The subject is bountifully illuminated by its citation of illustrative cases. It is well worth the considerate attention of every physician, lawyer and psychologist. Clergymen and all men who aspire to be generally well informed, should become familiar with this valuable book.

That the book is well gotten up in form and type goes without further saying, after the name of the well-known publisher is given.

THE JOURNAL OF MENTAL SCIENCE. This able periodical, indispensable to every alienist and neurologist, is always of value to the student of psychiatric problems, but the April number contains an indispensable paper by Clouston on the prodromata of the psychoses and their meaning. Also a valuable clinical record of a case of epilepsy, in which the fits ceased under five grains of salicin ter in die, by W. J. Vincent; the relation of hysteria to insanity.

The original papers and selections of this journal are always interesting to the alienist and often to the neurologist. The preceding and later issues are equally valuable, as our selection department often shows.

LES PSYCHONEUROSES ET LEUR TRAITEMENT MORAL: Leçons Faites a L'Université de Berne par le Dr. DuBois, professeur of neuropathologie, Avec une Préface du Professor DeJèrne, de Paris. 1 volume in-8°. 8 fr. Massen et Cie., Editeurs. Librairés de L'Académie de Médecine. 120, Boulevard Saint-Germain, Paris (6e).

The name and fame of the distinguished author should secure for this valuable work a cordial reception from all French readers of the A. and N.

PROGRESSIVE MEDICINE, VOL. I, MARCH, 1904.—Edited by Hobart Amory Hare, M. D., per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address. Lea Brothers & Co., Publishers, Philadelphia and New York.

Continues to come to our review table with its able

digests of the advance discoveries and improvements made in the Medical Sciences. We can only renew past commendation of this meritorious publication.

The Immediate Relief of Hysterical Manifestations of the Larynx. Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Laryngology and Otology, and approved for publication by the Executive Committee: Drs. George L. Richards, O. Joachim and G. V. Woollen. By Hanau W. Loeb, A. M., M. D., Professor of Nose and Throat Diseases in St. Louis University, St. Louis, Mo.

A Case of Circular Insanity Studied from Clinical, Differential and Forensic Standpoints. By Richard Dewey, A. M., M. D., Wauwatosa, Wis., with Gross and Microscopic Anatomy of Brain (from the Pathological Laboratory of the University of Chicago). By Thor Rothstein, M. D., Chicago.

Radium in Surgery. By Heber Robarts, M. D., M. E., St. Louis, Mo. Founder and formerly Editor *American X-Ray Journal*, First President Roentgen Ray Society of America, Member Roentgen Ray Society of London, Late Surgeon to the Northern Pacific Railway, Etc.

Preliminary Treatment in Minor Gynecological Surgery. By William B. Small, M. D., Philadelphia, Chief Surgeon, Gynecological Dispensary, University of Pennsylvania.

Reports of the Trustees and Superintendent of the Butler Hospital, Presented to the Corporation at its Sixtieth Annual Meeting, January 27, 1904, Providence, R. I.

Tenth Annual Report for the Year Ending, September, 1903, South Mountain, Wernersville P. O., of the State Asylum for the Chronic Insane of Pennsylvania.

Superintendent's Report, of Iowa State Hospital, Clarinda, to the Board of Control of State Institutions—for Biennial Period ending June 30, 1903.

Practical Clinical Notes on the Administration and action of Iodo-Nucleoid or Organic Iodine. By G. Frank

Lydston, M. D., Chicago, Ill. Professor of Genito-Urinary Surgery and Syphilology, Medical Department, University of Illinois: Attending Surgeon, St. Mary's and Samaritan Hospitals, etc.

The Practical Application of Cryoscopy to Medicine. By Henry W. Cattell, A. M., M. D. Formerly Editor of the *International Clinics*; Author of "Post-Mortem Pathology;" Translator of Ziegler's "Special Pathology," etc., Philadelphia.

Twenty-sixth Annual Report of the Trustees of the Danvers Insane Hospital, at Danvers, Mass., (Post-office, Hathorne), for the Year ending September 30, 1903.

Cardio-vascular and Blood-states as Factors in Nervous and Mental Disease. By F. W. Langdon, M. D., Cincinnati.

Report of Five Cases of Pulmonary Tuberculosis Apparently Cured. By Daniel Luce, M. D., Hartwick, N. Y.

Delirium Grave—A Critical Study, with Report of a Case with Autopsy. By William Broaddus Pritchard, M. D.

Apparent Recovery in a Case of Paranoia. By Richard Dewey, A. M., M. D., Wauwatosa, Wis.

Is the Epileptic Attack Explosive in Character? By J. W. Wherry, M. D., of Clarinda, Iowa.

Remarks on Syphilis of the Nervous System. By Hugh T. Patrick, M. D., Chicago.

Stenosis of the Lacrymonasal Duct. By J. C. Buckwalter, M. D., St. Louis.

Carcinoma of the Epipharynx. By Hanau W. Loeb, A. M., M. D., St. Louis.

How to Write a Medical Article; a Plea for Plagiarism. G. Frank Lydston, M. D., Chicago.

The Genesis of Epilepsy. By Louise G. Robinovitch, B. es L. (Paris) M. D.

THE
ALIENIST AND NEUROLOGIST.

VOL. XXV. ST. LOUIS, NOVEMBER, 1904. NO. 4.

INSANE SUICIDE, INSANE HOMICIDE,
OR MURDER, WHICH?

A STUDY OF THE MOONEY CASE.

By JAS. G. KIERNAN, M. D.,
CHICAGO.

MANY criminological forensic problems are made up of such mixed factors as to necessitate more than one legal theory to account reasonably for the facts in the case, on the theory of innocence which obtains under the common law principle of all English-speaking countries other than Scotland and Ireland. The Illinois case of *Mooney vs. the People* (in which Judge R. M. Wing twice secured a new trial, once on a reversal by the Supreme Court) demonstrates that logical data sufficient to convince a court of appeal, do not weigh with a rural judge and jury overwhelmed by the seeming atrocity of an alleged crime and so carried away by the suspicion of primitive man as to deem it better to hang the wrong man than nobody.

The case is hereinafter related by Justice Mulkey* in his opinion in the Supreme Court's reversal of the judg-

*111 Illinois Reports, p. 390.

ment of the Circuit Court. Michael Mooney was indicted in May, 1883, in the Will County Circuit Court, for the murder of John Anderson. He was tried and convicted, but the trial judge granted him a new trial and the cause was removed by change of venue to Lake County. March, 1884, he was tried and convicted, the jury fixing his punishment at death. He was formally sentenced to death May 23, 1884. In the meantime an application was made to the Supreme Court for a writ of error. This was allowed and a supersedeas ordered. The case was brought before the Supreme Court for review.

The homicide occurred in cell No. 310 in the State penitentiary at Joliet on May 30, 1883. The deceased and the accused, the only occupants of the cell at the time, were convicts serving unexpired terms in the penitentiary. As the deceased and the accused were alone in the cell at the time of the occurrence, it is reasonably certain that Anderson died either by his own hand or the hand of the accused, since it is highly improbable that the two acted in concert in committing the act. That Anderson died from wounds inflicted upon his person is conclusively shown, but that the hand of the accused wielded the instrument that produced them is not so clearly established. This the State was bound to prove beyond a reasonable doubt to warrant conviction. The evidence relied on for this purpose was altogether circumstantial, the accused being the only living person who had an opportunity of knowing the truth, and he positively denied inflicting the wounds in question.

Judge Wing, counsel for plaintiff in error, maintains first, that the evidence fails to satisfactorily establish the fact that the deceased died by the hand of the accused, and second, that conceding this fact is sufficiently proved, that he insists that the weight of evidence shows that the accused at the time of the homicide was insane, and hence not criminally responsible for what he did. The evidence in the case is in the main directed to those two vital points, namely, the imputed agency of the accused in the homicide and his alleged insanity. It appears from the testimony of Morrill, one of the night guards of the prison, who was on watch at

the time, that about half-past nine o'clock at night he heard—as he states it, “a terrible yell, as if some one in terrible agony,” when he at once started for the place, the scream, ing, with a slight intermission, continued all the time. He was but a moment in reaching the cell, when, looking in, he “saw Anderson down on his knees, bent over a stool, and holding on to the bars of the door with his left hand.” As soon as the guard got there he threw the light of the lamp he was carrying into the cell and asked: “What is the matter?” Upon repeating the question, Mooney answered he had been asleep and “guessed that fellow had a fit,” to which the guard replied: “Why don't you get down and help him?” Mooney then started to get down from the upper bunk when Anderson “let go his hold of the door and tumbled over in the cell.” The guard then left for a moment to notify McDougal, captain of the night guards, of what had happened. On his return with McDougal he entered the cell and turned Anderson over, who gasped twice, and expired. The guard then took Mooney to another cell, having no conversation with him on the way, after which he said to Mooney: “What did he do it with?” To which the latter replied, “With my tobacco knife—a knife made here which I had to save my bread knife.” There was blood on one of Mooney's hands, which the guard did not examine to see whether it was wet or dry, but it was evident from his testimony that it came from a wound on the prisoner's own hand, which he had received the day before. When the deceased released his grasp on the bars of the cell door and fell over, as just stated, Mooney was in the act of getting out of the bunk, but upon this happening and the guard having gone to notify McDougal, he resumed his place in the upper bunk and remained there for a minute or two after their return. There were found in the cell that night and the following morning together, a tooth with blood on it, a common case knife laying a few inches under the edge of the lower bunk near the middle lengthwise, and the dirk knife referred to by Mooney in his conversation with Morrill.

The floor of the cell and the body of the deceased were

almost covered with blood, but none was discovered on the bed clothing of either bunk, except a small spot on the corner of the sheet at the foot of the lower berth, hanging near the floor. McDougal in his testimony makes the additional statement that when he opened the cell that night Mooney made the remark, "I was asleep, by Jesus," and thinks he was a little raised on his elbow at the time.

Hingston, one of the coroner's jury, testified that Mooney, at the request of the jury, was brought into the presence of the body of the deceased at the time of the inquest and was told to look at it and make some explanation if he could; that the accused replied he did not know anything about it, for he was asleep; that on defendant taking off his pants, what seemed to be a blood stain or stains, about three inches in length and an inch or an inch and a half in width, was found on the left leg of his drawers, which the accused said he could not account for unless Anderson might have touched him with his hands. This witness further said on cross-examination: "Saw Mooney at his trial in Joliet and observed him here, and the same inattention and indifference that he manifests here I observed in him while before the coroner's jury."

The only evidence relied on showing motive in Mooney to commit the crime is the testimony of two or three convicts who claimed to have heard him a short time before Anderson's death express dissatisfaction with his cell mate. To one of them, according to their statements, Mooney said he "couldn't get along with that damned cell mate of his." To another he said Anderson was a crank—not be surprised some morning to hear of him being carried out of the cell. To another that he could not get along with his cell mate; that he was growling all the time; that it would not be a surprise to the boys in the wire shop if they heard of Anderson being carried out on a stretcher, if they did not take him out. The last two of these witnesses were in the penitentiary for infamous crimes (one for grand larceny, the other for highway robbery), which, coupled with the fact that no complaint was ever made to any of the officers of the penitentiary by Mooney, and that no one besides the convicts

appears to have known of any dissatisfaction on the part of Mooney with respect to his cell mate, undoubtedly entitles their testimony to but little consideration. It is but a part of the common experience of mankind that persons situated as these witnesses were, are ever ready to seize upon the slightest opportunity to favorably attract public attention to themselves with the hope that it may result in bettering their own condition. Moreover it is but reasonable to suppose, assuming Mooney to have had sufficient understanding to render him accountable for his acts, that had any serious difficulty existed between him and Anderson, he would have made complaint to some of the officers of the institution before resorting to such desperate means of relieving himself from the annoyance of his situation.

Before adverting to the medical testimony of the number and character of wounds found on the body of the deceased, it is important to have a clear understanding of the size, form and inside arrangement of cell No. 310, which is a part of the east wing of the building. This may be gathered from the testimony of Miller, engineer of the penitentiary. He says, "the cells are made of solid stone—walls, floors and roofs—the roof of one cell forming the floor of the one above it. The cells in the east wing are seven feet high, seven feet long and four feet wide. There is a double iron bunk in each cell, two men occupying each cell. Those bunks are one above the other, the upper bunk being eighteen inches above the lower one. These bunks are six feet two inches in length and eighteen inches in width. The space between the bunk which is placed close to one side of the cell and the opposite side of the cell is twenty-six inches. Each cell is furnished with two low, wooden stools and a little wooden pail for water, and a slop pail."

Some bed clothing was placed under the head of Anderson that night and his corpse remained in the cell until next morning, when his shirt and drawers were ripped open and removed from the body, upon which were found above thirty wounds, some two or three of which only were regarded as mortal. The number and description of the wounds given by Dr. Oakes are perhaps the most reliable. The

examination made by him, assisted by Dr. Stiner, was conducted in the presence of the warden of the penitentiary and others, including Mr. Hingston, a shorthand reporter, who noted at the time each wound and its description, as publicly called out by Dr. Oakes. The description as taken down by the reporter was then read over and pronounced correct by Dr. Oakes, and which, abstracted, is as follows:

“A wound through the lobe of right ear, penetrating the space between the mastoid process of temporal bone and the ramus of the lower jaw, passing into the cavity of the mouth, about one-half inch wide; a wound, simply cutaneous, three inches below the right ear, inclining a little downward and forward, about one-half inch long. The wounds in the acromial region are four in number, about one-half inch long, through skin and fascia, the direction of the wounds being from right to left oblique, at an angle of about 60° , the wound near cap of shoulder being a very little longer, and apparently deeper; one wound just below middle of claviola, oblique through skin and fascia, five-twelfths to six-twelfths of an inch long; one wound in second intercostal space, about five-twelfths of an inch long, through skin, fascia and muscle, entering pleural cavity, slightly oblique; one wound over third rib, a little outside of a perpendicular line drawn through right nipple, extending to bone, about five-twelfths of an inch long, slightly oblique. (The three wounds last described have the appearance of being stabs and the angles of the wound are deeper than the right angles by one-twelfth of an inch or more.) One wound one and one-half inches below the nipple, extending through the muscle, nearly transverse, about three-fourths of an inch long; one wound three-fourths of an inch long above the right nipple; one wound three inches to the left and a little below the right nipple. (These wounds, on close inspection, look like stabs, the left angles being deeper and wider than the right, and all of about the same dimensions.) One wound three inches to the right of left nipple and in left of sternum, severing third costal cartilage, and extending into third intercostal space, direction oblique, at an angle of 30° or a little less, entering the heart; a wound to the right of the ensiform cartilage, three-fourths

of an inch long, apparently a stab, the angle of entrance being deeper than the exit by one-twelfth of an inch or more, and terminating through a cut in the skin from left to right and downward at an angle of about 45° , culminating in a second stab of about the same dimensions and character of first wound; two wounds in lumbar region, one over second false rib, the other about three inches above the first, through skin and fascia about one-half inch long, and have the character of stabs; a stab over thenar eminence of thumb, through skin and fascia and partly through muscle; one wound over the fifth metacarpo-phalangeal joint; one wound over the center of the third phalange of index finger. (The latter three wounds have the character of punctures or stabs.) A wound between the third and fourth metacarpo-phalangeal joints has the character of an incised puncture or stab. The four last named wounds are upon the left hand. Left Arm—A wound two and one-half inches long over the outer and upper aspect of elbow joint, extending through skin and fascia into muscles, direction apparently from right to left and obliquely downward. Right Arm—Two wounds through skin only near the elbow, on the outer side of arm. They have the appearance of cuts about three-fourths of an inch long; one wound on the front and ulna side of the forearm, midway between the wrist and the elbow, about an inch long, extending through the skin and fascia into muscle, has the character of an incised wound. Back of Right Arm—A wound extending from the ulna to the radial side of the hand, on the posterior aspect of the wrist. This wound has the appearance of having been made by a knife cutting through the skin and fascia to muscle on ulna side and through the skin only for a short distance, and a second effort, causing the knife to pass deeper as it reached the radial side. Back of Left Arm—Two wounds on the dorsum of second metacarpo-phalangeal joint. They have the character of incised wounds about half an inch long extending through skin; a wound two inches long over back of left hand, the direction being nearly transverse and extending through skin and partly through fascia; a wound two inches long over back of left wrist joint, the wound ex-

tending through skin and fascia, the skin retracted much, and made a gaping wound by flexion of the joint; a wound in the posterior aspect of the left thigh four and one-half inches long, and extending through the skin and fascia and muscle, about three inches deep and near the center aspect of left thigh, two inches below the trochanter; a wound over the left gluteal region, one and one fourth inch long and one-third of an inch deep.

The medical testimony, as is not infrequently the case, discloses a diversity of opinion among the witnesses upon several important questions, though in many respects there is no substantial conflict between them. Drs. Campbell, Raynor, Dougall and Richards were introduced in chief by the people. Campbell and Dougall examined the body of the deceased the morning after his death, and before its interment. The examination made by Dr. Oakes was after the body had been disinterred, and was made for the express purpose of ascertaining with certainty the exact character and location of the wounds. The examination by Campbell and Dougall was doubtless chiefly for the purpose of determining whether the wounds were mortal, so they could speak with certainty before the coroner's jury as to the cause of death. It is evident they made no record of the examination, and their testimony before the trial court shows they had an imperfect recollection of many important matters connected with the wounds, as bearing upon the question whether they were self-inflicted or not. While their examination was sufficiently careful and accurate for the purposes for which it was made, yet for the reasons stated, that made by Dr. Oakes was more complete and satisfactory in its bearing upon the present inquiry. Dr. Dougall, who assisted Dr. Campbell, and who substantially agrees with him as to everything relating to it, says: "I did not make a memorandum of the exact locality of the wounds, nor did I charge my memory fully with it." Drs. Campbell and Dougall make thirty-one wounds, answering in the main those specified by Drs. Oakes and Stiner, while the latter make thirty-three, but the difference in results is a matter of no special signification, except as it may tend to show the care with

which the examinations were respectively made. The former claim to have found wounds on the palms of the hands and one about the gluteal region that extended into the pelvic cavity. The latter are quite positive there were no wounds at all in the palms of the hands, or either of them, and also that the wound in the gluteal region did not extend into the pelvic cavity. The latter wound, they insist, was a flesh wound, extending inwardly three-quarters of an inch only. This discrepancy is of more importance, but for reasons already stated, the conclusions reached by Drs. Oakes and Stiner are more correct. In making this statement it is not intended to at all question the integrity or motives of Drs. Campbell and Dougall. No doubt the conflict in question is the result of an honest mistake which might well have happened with any one making an examination under the circumstances for the purposes they did.

Under this state of facts the question is presented: What are the probabilities as to who inflicted the wounds found upon Anderson's body, and of which he is conceded to have died; were they self-inflicted or were they made by the hand of Mooney? In attempting to answer this question the important inquiry first arises: was it possible for Anderson to have made the wounds with his own hands? It seems clear from the evidence he might, with a knife in one or the other of his hands, have inflicted every wound found in his body, provided he was not prevented by loss of physical strength before the operation was completed. This, in effect, was admitted. Nevertheless it is claimed by the People the wounds could not have been self-inflicted, because, as is alleged, if the wound in the heart, the most fatal one, had been first made, death would have followed almost instantaneously, and before the deceased could possibly have inflicted the others.

On the other hand, it is contended that if the less important wounds had been inflicted first, whatever the order of their infliction may have been, they would have so shocked and weakened him that he could not possibly have inflicted the wound in the heart, and in this position the People are sustained by the opinions of Drs. Campbell, Raynor and

Dougall, as expressed in their examinations in chief, but the force of their opinions is greatly weakened by admissions on cross-examination, and references to cases admitted by them to be authoritative in the medical profession,* which are somewhat inconsistent with the opinions expressed by them. On the other hand, Drs. Oakes, Alexander, Hosmer, Curtis and Kiernan, witnesses called by the accused, and Dr. Richards, a witness called by the People, swear that all the wounds in question might have been made by the deceased himself. Thus it is satisfactorily shown by the decided weight of evidence that the deceased might have inflicted the wounds himself.

Strange as this case confessedly is, assuming Mooney to be guilty, one of the most remarkable features of it is that he should, by mere chance, have made thirty-three wounds on the person of Anderson, scattered over various parts of the body, without making a single one which Anderson himself could not have made. All these wounds, with the exception of three or four, were light and unimportant, some of them extending barely through the skin; and so far as they indicate any intention at all, they would seem to have been inflicted for purposes of mutilation and torture merely—just such wounds as an insane suicide would be most likely to inflict.

Turning now to the accused, it may be admitted that it was physically possible for him to have made the wounds, but the important point is: What are the probabilities? In determining this question many things are to be taken into account, particularly the size of the cell, the articles of furniture it contained, the size and construction of the bunks, the condition of the bed clothing, wearing apparel of the accused and deceased, and of the cell floor, after the affair was over. Were the parties in their respective bunks while the deed was being done? The location and character of the wounds show this was physically impossible. Moreover, the fact that the bed clothing on the bunk of the deceased was, with the exception above mentioned, free from blood stains, demonstrates the wounds could not have been inflicted while

* Gross, Erichsen, Bloch and Eve (*Surgical Cases*, 1858), and those cited by Beck.

he was in his bunk, and for the same reason the deceased could not have been in the bunk of the accused when the cutting was done. He must therefore have been on the floor, and if the cutting was done by Mooney, he, of necessity, was on the floor also, for he could not possibly have made all the wounds from his bunk. To have done the cutting on the floor he was necessarily in very close proximity to the deceased; and how could all this have been done without getting more or less blood stains upon his shirt and drawers? As already seen, the body of the deceased next morning was saturated with blood, and as the evidence shows, there was a great deal of blood on the floor, yet none was on the accused except a small spot or two on one of the legs of his drawers, which he accounted for by saying he supposed the deceased had probably touched him with his hands while he was lying in his bunk. This conjecture was not at all improbable, but the stain is more likely to have been caused by his drawers coming in contact with blood on something in the cell or on the walls of the cell when he got out of his bunk that night.

Grant, in his testimony, expressly states "there was a great deal of blood on the floor, and blood on the walls of the cell." Considering there was only about twenty-six inches space between the bunks and the opposite wall, which had more or less fresh blood on it, it would have even been remarkable if the accused had got down out of the bunk and passed out of the cell without getting any stains on his clothing. No importance or significance is therefore to be attached to the stain on the leg of his drawers.

Again, assuming the cutting was done by Mooney while both parties were out of their bunks, and that there was a great deal of blood on the floor, as stated by Grant, is it not morally certain that Mooney would have got more or less of it on his feet, and by that means have stained the bed clothing on his bunk? Yet no such stains were found there. But conceding this to have happened by some strange and unaccountable means, how was it possible for him to do all the cutting and carving it is claimed he did, without getting a single stain of blood upon his shirt, or even his

hands? And yet, in order to sustain the judgment below, this court must say all this, strange and unreasonable as it is, not only happened, but that there is no reasonable doubt of the fact!

But suppose, for the purposes of the argument, all this be conceded, and the case is to be considered upon the hypothesis that Mooney did the cutting and that Anderson was sane at the time, as it is claimed he was, and that he was making such resistance as his physical strength and judgment enabled him to, would it not have resulted in such a deathly struggle and encounter between them as would certainly have attracted the attention of the guard and every one in that locality? Would not something else have been heard besides wild, inarticulate shrieks or groans, such as described by the witnesses in this case? Yet nothing of this kind was heard by any one. Not only so, but all the circumstances considered, it is manifest that no such struggle could have taken place. Looking at the case from this aspect, the narrowness of the space in which the parties would have had to grapple with each other, the fact that it was in part occupied by the two stools, water bucket and slop pail; also that on one side of this space were the iron bunks, even a slight touch of which in a struggle of that kind would most likely have left its mark on the body, must all be kept in view. Think of a deathly struggle at the early hour of half-past nine in that narrow, crowded cell, over stools, bucket and slop pail, without anyone hearing or knowing anything of it. Think of such a struggle under such circumstances, without leaving a single bruise or mark on either of the parties to show it had taken place; would it not be taxing human credulity beyond all reasonable limits to ask one to believe that this might have happened? Of the thirty-three wounds on the deceased not one is a bruise or contused wound, and so far as the evidence discloses, not a scratch, abrasion of the skin, or mark was found on the defendant. Surely this could not have been, had such a collision really have taken place. But this is not all. Turning to the wounds themselves, it is found that most of them have been inflicted by blows or thrusts given from right to

left, indicating both method and deliberation, which, in connection with the fact already stated, that most of them are so slight and trivial as to indicate a purpose of mutilation merely, strongly negatives the fact that there was a personal struggle or collision between the prisoner and the deceased. If, then, there was no struggle, we must, upon the hypothesis of Mooney's guilt, assume that Anderson, quietly and without resistance, submitted to the butchery, a position still more unreasonable than the other, and therefore inadmissible.

Leaving this branch of the case and turning to the question of the prisoner's insanity, it must be conceded the case made by him is a strong one. As bearing on this question the testimony of the accused, his deportment, manner of testifying and general bearing throughout the whole affair are not without significance and greatly strengthen his case. In addition to this the evidence shows that his mother before him was insane, and that he himself, when fifteen or sixteen years of age, had fits and was subject to illusions. Add to this the positive opinions of eminent medical experts that Mooney at the time in question was an epileptic lunatic and the case is yet still stronger. The opinions of these medical witnesses seem to be strongly fortified by medical authority, and the witnesses themselves are evidently men of great learning and research. It is true other medical witnesses expressed contrary opinions and gave it as their best judgment the prisoner was sane, and consequently responsible for his acts. If this case turned upon the weight of expert testimony upon this question merely, a more difficult question would be presented; but it does not, for the wounds themselves, assuming they were made by the prisoner, raise the strongest doubt of his sanity. It is difficult to conceive of a motive, and surely none has been shown, that would induce a sane man to inflict between twenty and thirty mere flesh wounds upon various parts of the body, as was done in this case, when the sole object was to take life to rid himself of a mere petty annoyance, as is claimed was done here.

It is not necessary further to discuss this branch of this

case. It may be concluded by the general remark that, to say the best of it, the question is not free from well-founded doubt if it be assumed the killing was done by the prisoner. Indeed, from every aspect in which the case is capable of being viewed, grave and serious doubts of the prisoner's guilt are encountered. Such being the case, what is the law applicable to it? Fortunately there is no diversity of opinion or conflict of authority with respect to it. A conviction is asked in the case upon circumstantial evidence alone. The unquestioned rule in such cases is that before conviction can properly be had the guilt of the accused must be so thoroughly established as to exclude every other reasonable hypothesis. This has not been done. The whole case seems shrouded in mystery and doubt to such a degree that it would be dangerous to permit the conviction, and it should therefore be reversed.

One of the factors which impressed the ordinary mind as fatal to the theory of suicide was the very one which seemed to the Supreme Court to demonstrate an insane suicide. The idea that the insane are more susceptible to shock than the sane is wide-spread but totally erroneous. The absence of pain and shock among the insane enables them to attempt suicide, as I have elsewhere* pointed out, in ways impracticable to the sane. One lunatic dried his bread; then he sawed his chest open with it and stuck splinters into his heart. He recovered from those injuries. In four other cases from forty-five to one hundred and four wounds were inflicted in attempts at suicide. One man stabbed himself four times, penetrating the heart once. He then broke his skull with a hatchet and finally attempted suicide by drowning, but was resuscitated to die of his wounds. The heart wound was that on which the prosecution laid most stress, claiming that heart wounds must be instantaneously fatal, which claim was supported by emphatic statements on the part of the State's experts, whose assertions, as Judge Mulkey says, were weakened by admissions as to the validity of cases reported by leading surgeons. Such assertions would hardly be made today by any

* *Medical Standard*, Vol. xli., 1892.

regularly educated physician. In 1884, and fifty years before, such a positive position was untenable. Wounds of the heart, of its ventricles and its auricles, are usually mortal, remarks Beck* in 1851, "but it is remarkable that numerous cases are on record where life has been prolonged for a considerable time after the infliction of the injury. Instances of people living for a period longer or shorter after the heart has received a severe injury are to be found in every work on forensic medicine, and these are not to be looked upon as physiologic curiosities. They sometimes involve questions of life and death. Formidable however, and eminently dangerous as these wounds are, it is not to be denied that probably some have survived an injury of the heart. Wounds of the heart are not suddenly mortal. In the case of Mrs. Hamilton, murdered by Clough in 1833. at Bordentown, N. J., by repeated stabs with a dirk, seven wounds penetrated the left lung and three entered the left ventricle. She walked some distance down stairs after this and held some conversation, but then fell and died in fifteen minutes." With numerous cases of heart suture now on record the absurdity of such positive assertions is patent, but even then they were in defiance of the leading surgical authorities.

The evidence of epileptic insanity was so strong that when the hypothetic case of the defense agreed to by the State was submitted to alienists at a distance on deposition, Dr. C. K. Mills and others recognized the condition as one of epileptic insanity. The experts who testified for the prosecution ignored in their direct evidence all forms of epilepsy except ordinary *grand mal* and measured the accused by this standard only. On cross-examination they were obliged to retreat from this absolute position and to admit that the claims as to *petit mal* and its equivalents made by the defense were fully in accord with science.

On learning that the Supreme Court had granted him a new trial, and that it was probable he would be sent to an insane hospital, Mooney cut his throat but survived the injury. He had been sent to the penitentiary for pleading

* Medical Jurisprudence, 1851.

guilty to larceny and then arguing justification. He had been robbed of his clothes and money in an off-color boarding house, but took a silver watch which he found in his room and claimed to belong to the man who robbed him. He was promptly railroaded to the penitentiary by the owners of the lodging house, who had considerable political pull. After recovery from the throat wound he made a confession, whose statements completely conflicted with the State's evidence, but were utterly impossible. At the third trial the jury found him guilty of murder, fixing the punishment at imprisonment for life. The reason for this finding was that the majority believed Anderson to have committed suicide, but they also believed Mooney to be a dangerous lunatic, who would not be likely to get out of the penitentiary.

OUTLINES OF PSYCHIATRY IN CLINICAL LECTURES.*

BY DR. C. WERNICKE,

Professor in Breslau.†

LECTURE THIRTY-ONE.

Disease type of pure mania.—Leveling of ideas.—Course, interruption by lucid intervals.—Tendency to recur.—Diagnosis.—Paretic mania.—

Paretic grandiose ideas without mania.—Kahlbaum's progressive divergens. — Combinations with melancholia.

—Circular mental disease. — Chronic mania.

LIKE the disease type of affective melancholia derived from experience is completely explained by the assumption of an intrapsychical afunction, we also meet, although less frequently, with an acute mental disease, which may be derived in all its symptoms from the opposite state of intrapsychical hyperfunction. We call it mania and have an example in the patient Pr. recently presented. We will now consider the individual symptoms more closely.

The pathological facilitation and acceleration of ideation, which corresponds to the concept of intrapsychical hyperfunction, is manifested chiefly as *flight of ideas*. It is not merely a more rapid flow of the chain of thought extended between A and Z; for such would not seem to us pathological and indicate rather a desirable increase of the psychical ability. The prerogative of mental endowment or

*Continued from *Alienist and Neurologist*, Vol. xxv, No. 3.

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of genius depends essentially on the unusually rapid and more extensive thoughts in the same unit of time than is ordinarily at command. Wit, quickness at repartee, presence of mind, the versatility of interests and other valued attributes of prominent men are thus described. The pathological facilitation of association causes rather the inconvenience, that the train of thought is no longer strictly concluded, as it corresponds to the norm and represented by the worn path AZ, but that each link of the association chain extending between A and Z may afford the starting point of trains of thought, which normally correspond to suppressed secondary associations. That the strictly concluded train of thought is a result of practice and training, then functional acquisition, I have shown in my introduction. But in general where more complicated trains of thought are varied, a certain self-control or collectedness is needed to suppress all secondary associations disturbing the cardinal one. So long as this attribute of considerate thought is not lost, the contingent secondary associations may occur in intensified degree, and still the cardinal association be retained. Particularly in strictly trained minds this possibility exists. Thus results a greater abundance of thoughts, a state of increased productiveness and eventually actually increased ability, as it is occasionally actually observed in the first beginnings of the pathological state here to be described. Particularly in the *homo tardus*, in the mentally sluggish and little productive individual an advantageous change in the whole personality may in this way be produced for a short time. We could then speak of coördinated flight of ideas.

But usually flight of ideas lessens the individual's ability, in that it robs or limits his ability to hold to the cardinal association. The flight of ideas become incoördinate. Thus the rational judgment of the ability is lost and the feeling of increased capacity is developed, the counterpart of the feeling of subjective insufficiency of the melancholiac. As the latter causes the feeling of misery, here it induces the feeling of happiness or pathological euphoria. But here a certain degree of psychical ability is to be presumed, which

renders it possible for a self-perception of the changed personality to occur, an autopsychical paraesthesia in the sense above indicated. The affect of pathological euphoria controlling the disease type consequently presents frequently transitions to autopsychical perplexity. Still the patient can be fixed, for a moment at least, and thus established that a concluded train of thought is possible with exertion of the attention and under not too difficult requirements. If the disturbance exceeds this degree, the flight of ideas becomes not only incoördinate, but incoherent, a disconnected jumble results, so that the possibility of an intense affect is excluded. This severe form of flight of ideas, the counterpart of depressive melancholia, a state of confusion without definite controlling affect state, the "confusion with flight of ideas" of the authors, will be met with again in "confused mania." It is an intensified mania, a disease type, which exceeds "affective" mania. The justification for making this distinction, which corresponds just as much to our theoretical deduction as to practical requirements, is demonstrated, in that we may frequently observe in mania the transition into the other. This connection is here much more certain than in melancholia, where I might intimate, that the depressive form as symptom complex is independent of the affective and requires an independent consideration. But mania is quite often limited to the milder form not increased to incoherence, and in what follows I will always have this in mind, when I speak of mania simply. Confused mania will be given separate consideration.

Certain other symptoms are closely connected with that of pathological euphoria. The increased egotism, which is manifested in a pretentious appearance, a domineering manner, the consciousness of better knowledge and understanding. It corresponds to the same degree of intrapsychical hyperkinesis, as the akinesis of affective melancholia. In fact everything seems just as easy for the maniac as hard for the melancholiac. The autopsychical disorientation takes the form of grandiose delirium; the patient ascribes to himself attributes, property, offices and functions which do not accord with the reality; still the manifestations of this

grandiose delirium usually remain within certain limits not far removed from possibility, or they are only conditionally manifested as opinions and certain expectations, or uttered ironically, as though the patient was joking and would make believe. Still excessive and even fantastic grandiose ideas occur, but arising sporadically, changing from day to day, never fixed.

Pathological euphoria is occasionally combined permanently with a tendency to irascibility, at other times it is interrupted by irascible affects. Both are comprehensible, in that to the assuming, obstinate and dominant character, oppositions are naturally offered, which enhance their anger. If the irascible affect becomes permanent, it usually seems to be due either to physical maladies or long continued improper treatment by those about.

The increased action of association has two further sequela, which plainly show the contrast to melancholia. The patients' interest in all events they witness, their readiness to follow external suggestions, is increased. By the increased activity of thought, the necessity of retaining suggestions is in a certain measure augmented. This mental disposition may be confused with hypermetamorphosis, but is still entirely different, as will be perceived later. It is similar with the second sequela, the increased ability for decision and the tendency to transform the decision into actions. Speculation, impulsiveness, interference in others affairs is the consequence. On the ward the combination of these attributes suffices to produce the greatest disorders.

The patients are no less disturbing by two other symptoms, which are wholly within the range of intrapsychical hyperkinesis, the impulsiveness and loquacity. But impulsiveness is expressed, that the symptoms of hyperkinesis, generally differentiated as motor impulse, here has a special content, namely that of impulsiveness, or still better perhaps, desire for practical proof, i. e. in other words the impulse to act rather than merely to move. The hyperkinesis then affects particularly those more complicated initiative movements. This impulse is dependent on the increased rapidity and readiness to make decisions and the

increased interest in things, and causes the patients to commit various nuisances, to throw the furniture about, to spill the food, to tumble up the bed, to undertake the attendants' duties and to correct the patients and attendants on proper and improper occasions, or to actually attack them. In all more severe cases this impulsiveness degenerates still further, the patients demolish everything not clinched and riveted, destroy bedding and linen, paint the walls with improvised colors, not hesitating to use their own urine and feces, or, according to the individuality, write, compose poetry, draw and in this way consume quantities of paper. Besides the patient's movements usually have the import of expressive movements for the manifestation of their exalted, happy and boisterous or occasionally irascible mood: they dance, hop, jump, laugh, make faces, jesting, threatening and menacing gestures, etc. Many observations necessitate the conception that the patient's motor strength and shrewdness may be actually increased; at any rate their performances are often surprising in strength and shrewdness.

Loquacity seems to be a never-failing symptom of intrapsychical hyperfunction, corresponding to the experience, that mental production always causes communications. How much more so must this be the case in the boisterous, exalted mood of these patients. Where the irascible tinge predominates, it is sometimes wanting from psychologically comprehensive motives. The content of the loquacity always betrays the increased productiveness, if this may be of very different quality, according to the individuality. As the affect favors an exaltation of mood, it may be readily conceived how annoying and troublesome this sort of patients may be by their loquacity.

I have now to speak of an important symptom, whose derivation from general intrapsychical hyperfunction is not at once comprehensible, but which is constant in mania and of special interest to us, in that a symptom of opposite content accompanies melancholia. It depends on the leveling of the groups of supraquantivalent ideas. Maniacs all seem to suffer damage to their character. To none of these patients will it occur to manifest sympathy for other patients,

when they require ever so much. On the contrary he only complains of the disturbance which he thus sometimes experiences, and returns every interference with a blow. A certain brutality, an inconsiderate egotism, is manifested in this way. The maniac lies, cheats, steals without any compunction. He claims everything is allowable to him, which he censures in others. The manifestations of the sexual desire, which is usually increased, are also inconsiderate and shameless. No maniacal woman, and she might have been the most innocent and modest girl, is reserved in her opinions and knowledge. Likewise I have never seen a maniacal woman who would have considered it anything out of the way for the physician to see her in the bath, and the tendency of these patients to undress and use obscene language is well known. At any clinical presentation, if it also acts so powerfully on these patients and incites them to control themselves, their free and unconstrained behavior and mode of expression is strikingly pathological without comment. An officer, who is maniacally ill, does not hesitate to break his word of honor once, but ten times. All opinions of these things, which heretofore had constituted the aggregate of the most sacred feelings, are completely changed into cynicism. Ample manifestations are not wanting, by which the patients show their fidelity to conviction, disregard for all considerations of family, religion, honor, country, etc. We regard this entirely conformable change in character due to the normal quantivalence of ideas having suffered. But while in melancholia this happens in the way that a definite, narrow circle of ideas becomes supraquantivalent and alone dominating, in mania we observe a suppression and leveling of the normal supraquantivalent ideas, decisive in reflection and action which also determine the character of every person. That this leveling of the ideas in persons, whose character previously left much to be desired, must be especially ugly and imprint on them the stamp of vulgarity still more sharply than in other patients, must be expected and confirmed by clinical observation.

The *leveling of ideas*, one of the most important symptoms

of mania, becomes comprehensible when we regard the intrapsychical hyperfunction as a general exaggeration of the excitability of the intrapsychical paths, whereas the normal supraquantivalent ideas are explained by the physiological (functionally acquired) exaggeration of the excitability in definite, chosen paths. A general exaggeration of the excitability may then readily be the cause of the cessation of the difference in excitability due to the supraquantivalence of certain paths, a conception, which is suited to explain flight of ideas and the derangement of the concluded train of thought.

The clinical picture of pure mania is thus completely outlined. Only one subordinate point should be expressly mentioned, namely the occasional occurrence of phonemes, which then seem to be the perceptible conception of the grandiose ideas. They are usually isolated and present at the height of the disease and consist of words like "prophet," "Hohenzoller" or even "God," etc. Numerous hallucinations of the different senses only occur in confused mania, but more of this later.

Very conspicuous and different from all other acute mental diseases is the relatively underanged general condition in most recent cases of mania. The longer duration of the disease combined with loss of muscular strength leads to objectively perceptible loss of strength and severe impairment of nutrition. In part we must trace this symptom to the favorable influence an exalted mood generally exercises normally on nutrition. The single pernicious factor, which opposes it, is the insomnia or, at least, the lessened desire for sleep in these patients; for the appetite is generally increased, metabolism and circulation influenced favorably. We here find a dimetrical contrast to affective melancholia, in which gastric and digestive disorders, as well as lowering of the circulation are familiar and frequent symptoms. This contrast is most strikingly shown in cases of circular psychoses, where the transformation of the one disease type into the other may occur in days, occasionally in hours even.

Mania is usually of acute onset and a rapidly progressive disease. It is then stationary for a few weeks, occasionally

months, at a certain intensity, and then declines more slowly usually than it ascended. It is the most curable of all mental diseases, but not without danger. A not rare tendency to suicide deserves mention, which in moments of autopsychical perplexity, that may be accompanied by anxiety, finds its motive and facilitation of its execution in the rapidity of decision and an energy restrained by nothing. Severe self-inflicted stab wounds in the cardiac region I have repeatedly met with in maniacs.

The course of mania is quite often interrupted by lucid intervals so-called, which for a short time may simulate the advent of recovery. The quick transformation into apparent health is usually conspicuous, for it must always rouse the suspicion of the early return of the symptoms. The lucid intervals last only a few hours, again a few days and may frequently recur during the course of the disease. They are usually accompanied by a condition of languor and exhaustion, due to the prior restlessness. A state of profound moral depression may occur instead and especially in the rare cases in which the interval is combined with perfect disease insight. The shame for the conduct at the time of the disease may even be a cause for suicide.

The *diagnosis* of mania, in the restricted sense I have combined with this disease, is easily made. When the above described symptoms corresponding to an intrapsychical hyperfunction are found united, a maniacal condition may be diagnosed. If these symptoms are found exclusively and no others, it is certainly a matter of pure mania. As is seen, it is largely a formal disorder which exists, a delusion formation is to be spoken of only so far as the subjective feeling of increased ability is related to the grandiose delirium from the first, and in the course of the disease occasionally leads to real grandiose delusions. In recent cases where your advice and opinion will be required, a true grandiose delirium will scarcely be met with. Still there is an exception in this respect, and I will go into this somewhat more fully. It is connected with the question of etiology. In general pure mania, like affective melancholia, but perhaps in still higher degree, is to be included among those psychoses,

which very often originate on the basis of hereditary taint and neurotic degeneration. This is especially true of mania of adolescence, but occasionally of later life. But in the latter case another etiology will always have to be thought of, namely the paretic. *Paretic mania* is a relatively frequent disease, usually provided with characteristics, which at once assure the diagnosis. These characteristics are so familiar to you, that I need only to briefly recapitulate them here, they are especially symptoms on the part of the projection system and the early recognizable dementia, but chiefly an impairment of the ability to attend. But there are not all too rare cases, in which all indication of these symptoms is lacking, and which still are to be regarded paretic mania. The cases otherwise correspond to the above described forms of pure mania, but it is these in which a grandiose delirium is distinct from the first. This grandiose delirium has its special signs, for it belongs to the category of fantastic or demented grandiose delirium, which is specifically peculiar to progressive paralysis. Thus an expert member of the directors of a railroad believed to have made a startling discovery effecting the problem of a central switching arrangement, of which he said after his recovery, that it indicated only an unessential change in the present method. He further expressed the conviction, that he could marry another wife besides his present one, without difficulty. Here flight of ideas and loquacity only rarely occur beyond the degree of coördinated flight of ideas. Eight weeks bed treatment in a hospital and traveling afterward sufficed for his restoration. Two years later after the patient had constantly been actively engaged in a responsible position, a recurrence occurred with far more fanciful grandiose delirium and rapid progression to confused mania and, at this stage, symptoms on the part of the projection system first became noticeable. I need not say diminution of ability to attend and other symptoms of dementia were carefully sought for without being found. Only the smooth, less animated facial expression could awaken doubt in this respect. The further course then unquestionably confirms the diagnosis. I have many instances of a similar course.*

*An example of paretic mania is Case 8 of the "Krankenvorstellungen." Heft 2.

I might at this time emphasize, that there are also cases of this fantastic grandiose delirium of acute origin without mania, which may be free from any defect symptoms or those of implication of the projection system, and still prove to be paretic later, a so-called paranoid form of progressive paralysis recognized by most specialists.* In our sense we claim they are an acute expansive autopsychosis of specific paretic etiology. As a real mania is not demonstrable, every difficulty in diagnosis is removed. On the other hand I call to mind the form of *progressiva divergens* instituted by Kahlbaum,† which in its whole course, besides the fantastic grandiose delirium rapidly becoming inordinate, may present the symptoms of pure mania, but never leads to palsies or mental deterioration. Still these are extremely rare cases, of which in my quite extensive experience, I have certainly seen only a few.

Practically from these remarks you may gain the idea, that it is always a plus of manifestations, which decides whether a case is pure mania or not. It does not need to be especially mentioned that all farther disorders of content exclude the diagnosis of mania. Real motor symptoms, i. e. hyperkinetic strictly (see our scheme) have the same significance. Besides the symptom of hypermetamorphosis is to be especially referred to, which excludes pure mania, while it is often met with in confused mania, as we will see.

That besides pure mania, maniacal states of manifold sort occur and are to be judged entirely different, I have already intimated. They are either maniacal phases of composite psychoses occurring in stages, or combinations of two or more fundamental forms. Of the latter sort is the disease form of so-called irascible mania soon to be spoken of. I will return to all these combinations later.

Peculiar is the relation of pure mania to melancholia. Both these diseases show an inner relationship, in that they are combined in the three following relations.

1. A mild form of the one disease generally appears in the convalescence of the other and terminates it. The

* See Case 12 Id.

† The divergence has the figurative meaning of progressive disorientation.

duration of this change, which often appears after the patient's condition has become apparently normal, amounts to a few days or weeks.

2. Mania is that disease which of all psychoses is the most inclined to recur. Between the individual attacks years usually elapse at first, later the interval is shortened, so that finally the time of the disease may exceed that of health. Something similar, but very rare, is observed in melancholia. Clinical experience teaches, that now and then a recurrence of the mania is replaced by a melancholia, which then partakes of the better prognosis of mania, and that the same relation may also occur inversely. That is the *representative melancholia* mentioned before.

3. Finally a combination of the two diseases occurs quite often in the way that one excites the other. They are separated by an interval of apparent health, which may amount to days and weeks even, again is very brief and may even escape observation. This disease has long been known by the name of *circular mental disease* or *folie a double forme** and noted for its bad prognosis. In fact well marked cases seem to be absolutely incurable.

Still it must be considered that a single event of the sort occurs quite often without justifying the bad prognosis. It is probably the condition described under 1. It is to be further remarked, that it is often the mildest grade of both diseases, which occasionally do not at all impair the individual's social ability, more often only for a time. I know of instances of the kind, which have never interfered with responsible business activity, while others were compelled to go to a hospital at the time of the greatest loquacity. It is to be further remarked with respect to the prognosis, that dementia never arises from the circular mental disease†; the attacks always occur in the same way, whether the disease may have existed two or twenty years. The duration of the individual attacks varies, on the average it

*Since Falret and Baillarger, 1854.

†Strictly it consists of alternating phases of affective melancholia and pure mania. Still these are relatively rare. Further circular mental disease embraces all psychoses, which present a regular alternation of maniacal and melancholic conditions. See Case 5, Heft 1, and Case 15, Heft 2, of the "Krankenvorstellungen."

amounts to a few months. A special peculiarity of the circular psychoses might be, that its several phases develop more rapidly and decline much more rapidly than is the case in melancholia or mania. The duration of the maniacal or melancholic phase does not always need to be the same. I will take up the relation of the weight in this disease, which was regarded by L. Meyer* as characteristic.

While circular mental disease strictly always develops the same pure form of melancholia and mania, this does not apply to recurrent mania. The experience rather is very general, that it is transformed more and more into the more severe disease form of confused mania, and that new foreign elements are occasionally added.

It is also to be said of mania, that it rarely remains pure on somewhat longer duration, but that at the time of the height of the disease a condition of confusion is readily established, which in most favorable cases is based on pure flight of ideas, in more severe cases other elements are added.

The *treatment* of mania is in general impossible outside of an insane hospital.

Besides acute mania there is a special disease form, which deserves the name of *chronic mania*. I know of nothing definite to say of its origin, only one thing seems to me established, that an acute, pure mania, never becomes chronic mania. The attacks of recurrent mania, finally overbalancing the lucid intervals, do not become a chronic mania, at least not in the strict meaning of the term, which I can alone defend. Chronic mania has all the essential characteristics of acute mania, only modified so as the conditions of a chronic, stable condition is combined with it. The flight of ideas accordingly continues within moderate limits and is under the influence of a certain circumspection and self-control. Consequently the exaltation is less pronounced, but still occasionally breaks out. Whereas the infallible collisions with society will maintain an irascible mental state. The exaggerated egotism, which is not increased to a real grandiose delirium, is still very noticeable

*Arch. f. Psych. 4 Bd., p. 139.

and gives the individual a certainty of appearance, which in combination with the undeniable mental productiveness, facilitates its advancement. Thus they constantly create various difficulties and collisions by the disregard of all those standards and considerations imposed on them by law and custom. They make no allowance and demand the greatest consideration. A formal disorder of thought need not be hinted at in this condition. In a case of the kind a severe psychosis of many years standing had preceded, of which fuller reports were not to be obtained, but which certainly was not pure mania. The patient lacked all disease insight, and it was justifiable to regard his condition just described as recovery with defect, or, if this is objectionable, as a defect state acquired through a psychosis.

LECTURE THIRTY-TWO.

Presentation of patients of a hyperkinetic motility psychosis of puerperal and menstrual origin.—Pseudospontaneous movements.—Peculiarity of the movements, absence of loquacity.—Psychomotor loquacity.—Description of a case of jactatoid motor impulse.—Verbigeration in loquacity.—Choreic motor impulse.—Imperative actions.—Aimless motor restlessness.—Hypermetamorphic motor impulse.—Periodically recurrent course of the disease.—Prognosis and Treatment.

The patient, whom you see, looks feeble, pale, exhausted. In fact she has been in a state in which she has produced a surplus of movements, thus explaining that her strength has been consumed. Quite to our surprise a change has occurred since yesterday, after she had been in constant motion the day before, mostly theatrical, pathetic, expressive movements, and had sung almost continuously. This singing was at least very peculiar; it was accompanied by a fine tremor of the lower lip and the whole lower jaw, a movement similar to chattering of the teeth, but without the teeth striking together, and the voice thus attained a regular tremulous character, which resembled many hand-

organ productions, the more so as only the notes were sung without accompanying words, an evidently wholly invented, sustained hymn, almost always at a very high pitch, of the same quiet movement.

The singing, which with the patient's troubled, perplexed, unhappy facial expression, gave a constrained impression, hindered partaking food and ceased in the evening, when, in consequence of an injection of hyoscine and morphine, sleep of several hours occurred.

First be convinced of the extreme exhaustion and feebleness of the patient; placed on her feet she sways and needs support, sitting on the chair, she occasionally lets the head fall backward as in extreme fatigue, to inquiries she appears abstracted, or begins an answer, but soon loses the thought and stares into vacancy. Evidently she is able to follow only with effort, and greater demands I could not make of her, because she is really very much in need of rest and consideration. But her perverse mimetic action is conspicuous; first she opens the eyes so far that the white can be seen above the cornea, then she wrinkles the forehead as in anger, again she protrudes the lower lip and lower jaw. Further, her speech is seen at times to be markedly impeded, she forces out the one word like a stutterer, in that she tarries a long time on the initial consonants, or she occasionally utters gurgling, inarticulate sounds, and she is unable to show the tongue when desired, but only opens the mouth awkwardly. The words are often inaudible and therefore unintelligible. But at another time she speaks without any trouble and in this way tells of the origin of the disease. She is able to give her name correctly, age, the date of a previous confinement; she also speaks of a feeling of illness, that she is dizzy, cannot breathe properly. She also admits that the examination cost her an effort. Now and then she turns her head and listens, evidently attracted by phonemes. She often turns as for help to the attendant beside her and it is seen how hard it is for her to keep her attention. But familiar things, like the Lord's Prayer, seem to give her no trouble; she repeats it in a devout tone and with folded hands.

She then voluntarily repeats Luther's explanation of one of the Ten Commandments and then began to sing a choral, text and melody perfectly correct. I now raise her right arm to the horizontal position; she offers no opposition and maintains the position a short time, then lets the arm fall. Bending the head far backward causes her pain and encounters slight resistance. As the patient arises to leave the auditorium, she spreads out her arms laterally with hands supinated and makes a theatrical gesture, but then followed the attendant in the usual way.

The patient's mental state was not uniform, as you have seen. First, the apathy corresponding to exhaustion seemed to prevail, then indications of euphoria or irritation appeared, all within moderate limits, and an expression of helplessness and perplexity was always combined. The patient was not perfectly nor adequately orientated as to surroundings, and she made the strangest statements as to her own body; last night she had a hump, which has disappeared, and her eyes have been cut out. As to the cause of her movements only insufficient explanation was to be obtained; by a few isolated statements it seems show that the patient has been compelled to sing and dance.

As I at once presumed, our patient has had a pronounced hyperkinetic motility psychosis for four weeks, and we see that the following state of exhaustion plainly presented the signs of the largely motor character of the disease. The mimetic action without psychological motive, the occasional protrusion of the lower jaw and lips, the peculiar impediment of speech, the changeable inability to protrude the tongue, the pseudoflexibility, the unmotivated pathetic gestures, the equally unmotivated singing are distinct remnants of the preceding motility psychosis and to be interpreted in part as parakinetic, in part as akinetic symptoms.

With respect to the etiology of our case, it is now known that the disease has developed acutely in the course of a few days, after the patient, a potter's wife of 27, and married nine months, was normally delivered at the Woman's Clinic, and had remained psychically normal for ten days. She had nursed another child besides her own

and was thus somewhat debilitated. At home she was greatly worried about her child, listened to every breath, was fearful it might die, and on the second night she began to sing, to dance about the room and to talk of angels, whom she hears sing. The next day she mistook her husband for a physician she knew. The hyperkinetic motility psychosis has here developed, as frequently, after the puerperium, and, as we learn, one perfectly normal, and the patient is therefore an instance of puerperal mania thus falsely named, in which in reality it is a matter of all possible acute psychoses, but most rarely of pure mania.

Chance has favored us that I can present another patient, who displays the florid state of a hyperkinetic motility psychosis. You see that patient enter dancing a waltz step and singing a waltz song. She then tapped her vertex with her open hand and says: "Holy water," bowed and repeated the word and the same movement five times. A motion of my hand, by which I invited her to take a seat, she correctly comprehended and seated herself suddenly in a chair, but got up soon, bowed her body and threw her head forward so that her loosened hair fell over her face. She rhythmically repeated it about twenty times. Then actively gesticulating and talking constantly, she walked about with regularly accentuated steps, resembling the forcibly exaggerated, expressive movements of a minuet. The rhythm of these dancing, hopping, jumping movements of the whole body is remarkably definite, in a certain measure carried to the limit and may indicate a great expenditure of strength in their execution. They are accompanied by correspondingly energetic, expressive movements of the arms. The patient rolls the eyes, makes an angry, then a haughtily repellant or comical face. Threatening movements, attempts to strike, but not in earnest and is at once diverted, occur. Several connected assertions, once: "They (or you? not to be decided) must be chopped at the stake." On the whole the mental state seems to be very unstable, like the movements, at first extremely happy, then haughty or more irritable. In general the patient is not to be fixed or only for a moment, she at

once very promptly affirms the question: "Why do you dance; are you happy?" Then when asked: "Do you know who the gentlemen are?" she begins to sing: "So might Heaven forgive you."

The connection of her spontaneous, almost constant, speech movements with the other movements is very noticeable. It is shown by the voice being often raised corresponding to the rhythm of the general movements, and as this happens, as in the movements, in a greatly exaggerated degree, much that is said is incomprehensible or only fragments of sentences or isolated words or syllables enunciated. But further, the content of these isolated fragments of talk is often in striking connection with the movements. So *e. g.*, the patient assumes a military attitude, with the right hand makes the movement of stroking the mustache, and says in guttural tone: "Lieutenant of the guard." Another time she raises the arm bent at right angle, opposes the tips of the thumb and index finger with the gesture of the epicure, and says: "Roast pork." Or the patient extends the arms and hands and says: "I have ten sound fingers." Or while she has her arms outstretched and makes swaying movements with the trunk: "How can the tailoress balance?" It is evidently these movements, which completely divert the patient's attention, so that she is only to be fixed momentarily. Besides you have seen that incidental sense expressions divert the patient and cause movements, while she usually ignores my questions and requests. Still the patient is gotten to sit, when she in silence confines herself to theatrical movements of the hand and, as I say to her, she can go now, at once comprehends this correctly and arises.

This patient, a tailoress of 36, unmarried, looks pale, emaciated and worn out, which is very natural from the expenditure of strength owing to the almost continuous forced movements. She has now been in the same condition for five weeks, only varying in intensity now and then. Sleep is only attained by hypnotics, of which hyoscine seems especially effective, the food taken is insufficient and disturbed by the motor restlessness.

With respect to the patient's clinical history we have learned the following. Psychoses or severe neuroses have not previously occurred in her family; her father died of consumption at 52. Patient had gotten on poorly in school, but was industrious, very honest and has lived properly. With a sister she carried on a tailoring business and has worked too hard, of late years she has also had *menstruatio nimia*. Eight years ago the patient was depressed for three months, probably melancholic, at any rate she had feelings of misery, very self-reproachful, and the relatives noticed peculiar "knotting" movements of her hands. Afterwards healthy, only she always presented at the times of the menses a marked irritability and sensitiveness. Eight weeks prior to admission she had a premenstrual attack of frenzy for two days, in which she talked and sang constantly, was always in motion, threw the furniture about, had terrifying hallucinations of sight and hearing, verbigenerated and occasionally mistook persons and surroundings. According to the relatives' description she had very marked hypermetamorphosis. With the appearance of the menses quickly became quiet and slept spontaneously. The following menstruation in four weeks was attended by no disturbance. Two days before the next menstruation, occurring exactly four weeks later, her admission to the Clinic was necessary owing to a new attack of frenzy, after the patient had spent two days at home in a state of furor. This time the appearance of the menses had no influence on the disease. To-day, on the day of the demonstration, the patient should have menstruated again, for it is five days more than four weeks since the last period, but the menstruation this time seems retarded or not to occur at all.

These data are therefore of special value, because they show us a certain, if somewhat indefinite, influence of menstruation on the origin and decline of the psychoses, and I must here remark, that this is not the only experience of the sort, but that it so often recurs in the hyperkinetic motility psychoses, that it is necessary to recognize it as the most frequent type by far of the menstrual psychoses. The hyperkinetic motility psychosis is more often of men-

strual than puerperal origin. I will return to these etiological conditions later.

Odd and peculiar as the movements are, which you have observed in our patient, perhaps a doubt might have arisen, whether they are not in part at least voluntary productions of a hysterical, theatrically constituted person. Hysterical antecedents are wanting, and the efficiency of isolation speaks against it, for it is not really perceptible why such productions should be continued by a hysteric, where witnesses are entirely wanting. Finally the patients' statements when they have recovered or only become quiet for a time, are that these are independent of their volition and occur from some incomprehensible or diversely interpreted impulses. But you will properly ask for the positive signs to differentiate the *pseudospontaneous* movements from intentional productions. Such signs are actually present, as you have seen in our patients. A certain uniformity and monotony of these movements, a tendency of the same form of movement to recur, which may be increased to rhythmical repetition, will be especially conspicuous. Also in the vocal assertions it is manifest and in our patient has repeatedly led to verbigeration. Second the excessive, forcible, in a certain measure exaggerated, character of these movements will not be overlooked, the unusual muscular display, which is combined and gives certain movements a grotesque trait. In our patients it is also noticeable in the speech movements and is besides not always peculiar to the pseudospontaneous movements and is occasionally combined in expressive movements, like laughing, crying, singing. You remember the patient,* who apologized for her song, a production in itself perfectly proper; she had to sing, although she did not want to. Finally the evident aimlessness, absurdity in the form of the movements, would have to be mentioned, as when the patient repeatedly placed her open hand on the crown of her head, spread the fingers, rhythmically bowed the body forward, or balanced on one leg, etc. This aimlessness differentiates the pseudospontaneous movements from the usual occupation deliria so-called, combined with compound

* See Alienist and Neurologist, Vol. XXI, p. 19.

hallucinations, which often leave nothing to be desired in the way of uniformity, and from a part of the psychosensory movements, especially due to cutaneous hallucinations, *e. g.* in alcoholic delirium. Then when the movements, as we have often observed in the past semester, resemble gymnastic exercises, you will certainly find them here, during the clinical demonstration, entirely out of place and evidently aimless.

The closer analysis of the pseudospontaneous movements affords us then certain data, that the movements are not of psychological motive, but a consequence of an identification disorder between *Z* and *m*, then of the psychomotor tract. A clinical experience, which in one case was only pronounced at times, leads to the same result, for the patient spoke much, but which in many cases of hyperkinetic motility psychoses, assures the diagnosis almost at the first glance. It is that the motor impulse of the hyperkinetic motility psychoses is not accompanied by a corresponding loquacity, but in the matter of speech often by the opposite symptom of mutism. A striking contrast always exists, a disproportion between the slight degree of loquacity and the extreme motor impulse. You see how it is different here than in mania, where the loquacity predominates and the motor impulse proportionately subsides or is manifested more as a desire to be occupied. But if pronounced loquacity exists, which is quite often the case, it betrays in the changed form of talk its origin from psychomotor identification disorder; the uniformity leads to verbigeration or at least to conspicuous repetition of the same words or phrases; the excessive expenditure of strength leads to motiveless crying or howling, the aimlessness in the gratification of the vocal motor impulse leads to senseless combinations in content and not once to words or syllables related by sound. Instead of productiveness, monotony, instead of flight of ideas, incoherence are in general the signs of psychomotor loquacity in contradistinction to the intrapsychical. A further sign referring to the content is afforded by the hypermetamorphosis almost never wanting in the hyperkinetic motility psychoses. The following reproduction of the spontaneous utterances of a patient will

illustrate what has been said: "Scullion or bubble, for it begins to bubble or to burn, or with others, ah, Jesus, says my Mutho, always from the beginning, if she was so small, ah so, ah, Anna, a, n, a, in height, or so much drops from above, ah, Jesus. I findest thou, ah, Jesus and hence because she smaller, getel or gattel or Philadelphia or America or in Tyrol or the or doubles, ah, pocket pistol with and without report, as the matter is so, oh, Jesus, Jesus, it goes once, 2, 4 times as many as it goes to me so, straight out so, then 2, 3, ah, Jesus, ah indeed, that is very fine, that is called counting, the first, the first song, oh Jesus, consequently one says work or destroying angel (strangling movements!) (to the attendant:) I might take away the cushions, for so many things, ah, Jesus, little star, her little child, come oh, come, oh not yet, just the same. Stop, what is it, what is it that comes from my home, ah, Jesus, ah, ah, ah, or from my chum, from the beginning either from Hanke, Anke kekeke——"

Only the milder or mildest grades of the pseudospontaneous or *psychomotor loquacity* may interpose difficulties to the diagnosis. Here the intention to continue a coördinated form of speech is in opposition to the psychomotor impulse, whose result is very characteristic for the specialist. A falsely placed pathos, a singing, declaiming or pathetic sound of the talk with frequent elevation and lowering of the pitch, an increased tendency to rhythm permitted ascribing these productions to a pulpit orator with strong effects—even to content. But this showed itself apparently influenced by the changed form of talk, similarly as the form of motor impulse in our patients might show an influence on their ideation, for it is preferably biblical, or united at least to Bible passages, verses from the hymnal, catechism explanations, remembered sermons, etc. A patient of the kind found that her talk "dropped from her lips like honey." That also the monotony of the content, the tendency to repetition of the same words or phrases is thus manifested, I mention for the sake of completeness. You see that the psychomotor loquacity in each case presents signs enough to readily identify it as such.

The importance of the subject, the sort of movement executed in hyperkinetic motility psychoses needs to be gone into somewhat more fully. In general they remain between two extremes, in that at one time the movements seem wholly involuntary and may evidently occur counter to the patient's intention. As type of the first I refer to a young man acutely ill, whom I presented in the previous semester, who mute, with congested face and under evident effort, performed regular gymnastic movements of the arms and trunk for ten minutes. These movements are so exact and apparently objective, that you will perhaps doubt, if it has not been a voluntary production of the patient. After a few weeks of this hyperkinetic state, which was sometimes replaced by akinetic phases of apparent exhaustion, he became quiet, but with a rapidly increasing mental enfeeblement, while the greatly reduced nutrition has been replaced by a rapid increase in weight. You would now scarcely recognize the ruddy, apparently profoundly demented patient, quickly refusing all commands to think and becoming angry. The evidently unintentional movements form the other contrast, which resemble the jactation of unconscious states. Only the monotonous recurrence of the same form of movement is common to both. An unusually pure case of the latter kind could be presented in the Winter semester of 1891. A moderately well-nourished, perfectly self-possessed, thoroughly attentive and oriented Mrs. W. of 79, protested that a peculiar motor restlessness constituted her own illness. This is very slight in the morning on awaking, then increases slowly during the course of the day, attains its maximum in the evening, so that the patient cannot rest half the night, until she finally falls asleep from sheer exhaustion. Her kind of motor impulse was aptly described by my assistant at the time, Dr. Kemmler. I will quote only the most essential: Patient sits in bed, but constantly changes her position, first she tries to move to the upper edge of the bed, then to the lower, or tries a position on the side, or raises up as if she would try to stand, then she tries to get out of bed. These movements occur in extreme haste, usually one movement is not completed before the other, often of an entirely opposite

kind, begins. Pauses occur almost not at all. In her haste she always makes the same futile efforts and the same movements constantly. The patient's assertions, which accompany her restless impulses confirm the assumption as though the patient could find no position or posture in which she feels comfortable, as if every attempt to take a certain position caused an unpleasant feeling, which she would get rid of at any price. She always tries all possible means. Such assertions are: "I do not lay right so, I cannot remain so, I must lie entirely different, so I must not sit, I cannot stand it so, I must get rest, if I could only get up, if I could only lie down, but it does not do, perhaps it would if I do not lie down at all," etc. In her helplessness she appeals to everyone to help her, and finally moans like one in despair. If anyone approaches her, she at once claims this assistance, *e. g.* grasps the physician's hands, lets go of them, at once seizes them again, supports herself on his arm, clings to his sleeve and at once ceases every attempt. "Ah no, it does not do so. You must help me differently. You do it wrong. If you would hold me so," are characteristic assertions. If the patient is asked how she will be helped, she replies: "That is just it, that I cannot find out." The presence of the physician or attendant always has a somewhat quieting effect, patient begs she shall be left entirely, then it would be better for her. It is conspicuous that the patient very often makes an entirely contrary movement than she has stated was her intention. So *e. g.* she decides she shall be laid down and then always raises herself on the arm of the person who will help her. Or she will get up and does not make an effort to arise. Corresponding assertions leave no doubt as to this: "Ah, that is not at all what I have wished, it should have been entirely different. I would so gladly lie down that I can sleep, but I do not know how it shall begin. For God's sake, what shall I do that I can sit." She sometimes directly opposes the help offered at her request. On energetic command in earnest tone to cease her movements, she is quiet for a time and feels perceptibly relieved. It is likewise seen that she can voluntarily perform all movements

on command. Still after a few minutes her old movements begin. At the climax of her motor restlessness the patient is entirely absorbed in her movements and it is hard to fix her attention. She then repeats the question instead of answering it, or uses prolix phrases and thus loses the construction, or leaves the sentence unfinished. Meanwhile assertions like: "I will tell you afterwards what I cannot think of at this moment," etc. Once the patient was even unable to give her name; on such occasions she shows her annoyance; "I know it perfectly well, only owing to the restlessness I cannot speak it now." A part of the patient's movements resemble a case of occupation delirium so-called.* Thus *e. g.* she occupies herself constantly with the bedding, pushes the covers off, pulls them up, first covers, then uncovers herself. She also occupies herself with her clothing; she puts it all on or parts of it and takes it off again, often with the wholly undesigned result, so that she sits there naked and then complains, because it was so improper. While she verbally asserts a certain intention, she quite often does the opposite. At night the patient was very restless, constantly pushed the covers off and then expressed the desire to be covered, because it is so cold. As she was assisted and covered, she suddenly became perfectly quiet and soon went to sleep. Evidently she was unable to start the consecutive acts: to grasp the covers, lie down and draw the covers up—to unite them in an action. With pencil and paper given her to write, she was able to accomplish just as little. As stated, the restlessness ceased when the patient was earnestly admonished, just as she performed some complicated movement on command, which then always succeeded, or when she is made to attend and to impart certain information.

Patient showed she was talkative, in part garrulous, but without real loquacity, now and then the expression failed her, especially in the designation of verbs and abstract ideas, her verbosity often served for paraphrasing or seeking the correct expression. Asked for the reason of her aimless movements, she showed a certain insight: "That must be

* See Lecture Twenty-six.

so naturally, that is just the misfortune, I do not know what it is for." Patient denied many movements after she had performed them. Thus she, *e. g.* very quickly pulled off the jacket and then claimed she could not have done it at all; another time: that can only be an accident. She put a stocking around her neck and says: it is not a proper necktie. The second stocking she turned and quickly drew it over her head like a cap, is then astonished and put it on the foot properly. On request she protrudes the tongue hesitatingly and spasmodically. Frequent verbigerating repetition of the same phrases, *e. g.* "Oh God, pity me, please help me do right." Never hypochondriacal sensations, always perfect orientation, good memory and ability to attend.

After becoming quiet an uncomfortable feeling might have caused the movements, they could not have been voluntary. The uncomfortable feeling was located in the chest and gradually affected the whole body. At the time the motor restlessness ceased, indications of delirium of relativity; another patient behaved so peculiarly, one could not get any rest. It must be well to lie on the bed, that she could get no rest. In the morning begged for a hypnotic, but at once said she would not take it. Claimed she was cold, at once asserted the opposite. Once said perfectly senseless: "Can I get up now or can I eat something before?"

Patient, previously well, had lived in the General Hospital. The last four weeks before her admission (on September 12th, 1891) often sleepless and complains of headache and increasing weakness; a few days before admission the "twitching" began, as the patient called it. That she therefore has been considered insane and brought to the insane hospital displeased her very much. The motor restlessness soon attained the intensity described, and continued until the beginning of October with the exception of a slight remission from September 21st to the 25th, and then to be replaced by complete quiet in a few days until October 6th. A relapse began October 27th, increased in extent and intensity until November 17th. On the 18th the greatly exhausted patient presented fever and symptoms of pneumonia and died November 22nd. An influenza epidemic prevailed at the time. At the time

the relapse began repeated assertions, that the patient did not know what she really wanted and that this would be just as remarkable. Soon again great helplessness in the choice of motor means. Temporary and half corrected ideas of injury, she was jeered at, laughed at, tormented, mistrustful of those about, fretful, irritable mood. First only the impulse to get out of bed, motor impulse of the hands later, and loquacity after increase of the motor impulse from November 1st. This time modification of the respiration, which was of a gasping character, as in extreme anxiety. But anxiety itself was always denied. The paraphrasing in the loquacity this time more pronounced, the nutrition more impaired, the whole attack more severe and increased to temporary fear of approach. No hallucinations, hypermetamorphosis was never marked. The allopsychical orientation only temporarily disordered in extreme restlessness. In the last days before the rapid decline of the disease, fulminate twitching of the arms, which even deranged the voluntary movements. The forcibly attracting the attention had the same quieting influence as in the first attack. The following sample of her loquacity from November 4th shows that ideas of anxiety existed: "My dear Doctor, I am entirely wrong, oh, God in Heaven pity me, Father in Heaven, pity me, Good Doctor, help me. Let me out, Heavenly Father, do not forsake me. I am not able. I am perfectly right. You are compassionate. I cannot do differently, oh, dear God. No, no, no, I must go, be merciful Doctor, you are merciful. Ah, Jesus Christ, pity me. I fail in everything. I have a wrong idea. Farther nothing is important. Be merciful to me a sinner. Oh, Doctor, forgive me. I will gladly follow, here I am damned. You do me great wrong, pity me. Now I stay. Yes, oh, my God and Father, do not forsake me. Doctor, I am unable to save myself. I earnestly pray, do what you will, I am entirely innocent. Thou all good God, pity me. Heavenly Father, pity me. Dear, good Doctor, listen to me. Good God, stand by me, pity and be gracious to me. I am a sinful person. Oh pity me, Sir, pity me," etc.

The case is so instructive in many respects that we

must still tarry with it somewhat. First of all it is extremely rare, that the hyperkinetic identification disorder of the psychomotor tracts is so pure and uncomplicated by other symptoms. I remember a similar case of a clerk K., 21 years old, who was admitted December 27th, 1894, and transferred to the custodial asylum of the province on March 21st, 1895. He had previously manifested a hyperkinetic state with explanatory delusions (of being a gymnast) for several days after a debauch and therefore was treated by us for 17 days in November, 1894. It was conspicuous in this patient, that a rhythmical recurrence of the movements was lacking, that he was perfectly oriented, combined no explanatory ideas with his movements and was so conscious of the compulsory engagement of the attention by the movements, that he often answered questions: "At once," or "wait," or "I must." In this patient it is a matter of the same sort of movements to be more fully described later. This condition was still increased to an intensity of complete confusion, during which the patient was incapable of being fixed. It was also always accompanied by a very marked hypermetamorphosis, contrary to the patient previously described. Here the course was not continuous, but the patient had a perfectly lucid interval with disease insight and signs of exhaustion from January 17th to the 26th, 1895, and a second for only one day with extreme exhaustion on February 6th. We will learn later that the patient after staying a year in the custodial asylum was discharged. I am indebted to my colleagues for the following information: His disease in the asylum was called remittent mania;* periods of maniacal, even stormy excitement alternated with those of quiet, but in which the patient was more or less confused. Later the maniacal paroxysms became shorter and less intense, in the periods of quiet the presence of mind gradually increased, disease insight appeared, the patient physically improved with a marked increase in weight. From November, 1895, he could be regarded convalescent, but for precaution's sake was detained in the asylum during the winter months.

* Of course not mania in our sense.

This is the patient, of whom the same motor loquacity given in an earlier lecture was obtained.

With regard to the sort of movements, it may be stated of both patients, that their motor impulse is characterized as reactive, while the patients first presented have likewise shown the essentially initiative and expressive motor impulse, executing gymnastic movements. The movements in the patient W. resulted reactively from the uncomfortable muscular feelings, also in greater part in the patient K., but besides from other abnormal physical sensations, of which formication over the whole body and constriction in the throat were asserted. To the latter statement a paroxysmal panting, blowing and ejaculation of inarticulate sounds was to be traced. In any case they are pathological organic feelings, which are the basis of the reactive movements. The similarity to occupation deliria, which is inherent to a part of the movements observed, are readily comprehensible from this point of view, for the occupation deliria depend on reactive movements. But we will not go wrong, when in our cases we regard the manipulation of objects accidentally present in contrast to delirium tremens not as readily due to these, but assume, that the patients only use the occasion presented to discharge their motor impulse on the objects.

The name *jactatoid motor impulse* might be recommended for these cases. The similarity of the movements described to those of jactation in the unconscious state is evidently founded on the fact, that the jactation is produced by unpleasant organic feelings.

The affect in the patient W. was much plainer than in the other patients. It is that of motor perplexity, paroxysmally increased to actual anxiety and despair. The ideas of anxiety expressed dated from the time of maximum intensity. We will also have to regard as signs of increased intensity of the disease process the paroxysmal occurrence of anomalous, incoordinated movements, while on the other hand there can be no doubt, that at the time of an essential abatement of the disease a contradiction in the volitional intentions of the patient was observed, which was always soon corrected.

It might not be superfluous, at this time, to refer to the fact that the severe general chorea, which we are accustomed to place among the functional nervous diseases, is not so far from our domain. Chorea is no longer at least comprehensible as a psychomotor identification disorder, it far exceeds this, in that it may display an irregularity in the performance of individual movements and thus a defect in the congenital muscular coordinations. Owing to the differential diagnostic point of view, I will not neglect briefly mentioning the signs, which still adhere to the cases of severe generalized chorea. Corresponding to this discharge of muscular coördinations, the patients with chorea show symptoms of severe paralysis: the head in the pauses of involuntary movements is usually very unsteady, the trunk shows the same instability, so that standing, walking, sitting are impossible. If these patients are stood up they present the picture of severe ataxia in every effort to move. In such cases speech generally becomes stammering and unintelligible, as well as swallowing may be impossible at times from paralytic awkwardness of the tongue. On the contrary a choreic impulse to crying and ejaculation of stammering sounds is occasionally manifested. It should be generally known that these cases of severe chorea are very commonly attended by certain maniacal symptoms: loquacity, flight of ideas, conspicuous unconstraint and inconsideration, *e. g.* in questions of the descendance, etc. On the other hand a pathologically irritable mood and irascibility may prevail.*

Cognizance of the form of severe general chorea described, for example known as a dangerous complication of pregnancy, is the more important in the differential diagnosis from the hyperkinetic motility psychoses, for transitions between both states occur quite often, as our case W. proves. The form of hyperkinesis then to be observed we may designate *choreic motor impulse* and characterized as an exaggeration of the hyperkinesis, or in other words, an encroachment on the domain of primary identification. The composite magnitude of the motor ideas shows their existence is

*A typical example of severe chorea is Case 13 of the "Krankenvorstellungen" Heft 2.

threatened. Such a choreic motor impulse, which rarely exceeds the concept of hyperkinesis, is especially observed in epileptics and paretics, in the first as a component symptom of profound dazed conditions, usually post-epileptic and of short duration, a few days at most. In paretics, in two opposite states, accordingly as it is a matter of the initial or terminal stage of the disease. In the initial stage of paresis it corresponds to a mild degree of choreic motor restlessness, which may be largely unilateral and resemble chorea minor, in the terminal stage it is usually a matter of blind rage continued for weeks, generally trunk movements largely, apparently in a dazed condition, usually performed mutely.

Evidently certain *impulsive actions* form the contrast to these irritative states encroaching on the motor projection field, whose hyperkinetic mode of origin is undoubted according to the patient's statement, but is also to be derived from the connection of the whole disease. I observed the disease in an unmarried woman of 28, who presented the same condition unchanged for about two years with certain remissions. During these she needed constant supervision, because she was inclined to violent actions, wholly without provocation, *e. g.* would strike, throw knife and fork or pull hair, and was generally kindly disposed towards her associates, toward those about her. These impulsive acts occurred repeatedly, but without any provocation and wholly unexpected and were therefore dangerous. Besides in the intervals the patient was perfectly quiet and rational, could always be kept at home and only occasionally presented smacking movements of the lips and another symptom especially offensive to her and her relatives: the involuntary utterance of improper words.* The patient was unable to suppress this, she was however able to speak half audibly and to be diverted. This patient had an exacerbation of her condition for eight days, in which a severe choreic motor impulse corresponding to our definition given above, existed constantly. The patient generally muttered half audibly and unintelligibly to then suddenly elevate her voice

* Koprolalia of authors.

spontaneously to ejaculate some insult or obscene expression. The motor impulse was also suddenly and impulsively interrupted by coordinated actions, in which the patient suddenly struck, scratched, pulled hair of persons about. The state of exhaustion following this acute attack introduced an improvement, which gradually terminated in complete recovery.

In this case the impulsive actions, like the speech movements, plainly showed their origin from objective ideas arising under pathological irritation, and the patient later definitely stated never to have heard voices or commands. We will do well to differentiate these psychomotor actions as impulsive. The actions caused by hallucinations or other sensory motives, if they also occur spontaneously, evidently do not belong here. But especially characteristic of these impulsive actions is the relation to the course of a pronounced psychosis. They then readily become the source of complicated explanatory ideas. Thus the first attack of the patient K. above mentioned lasting only three days, consisted essentially of the performance of gymnastic movements, which caused the patient to fancy being a gymnast, and to develop a sort of grandiose delirium in respect to his personal capacity. Another patient, a baker's apprentice of 17, who had always been very pious, suddenly perceived the incentive to kneel down and pray, and interpreted it as a direct communication from God. A sort of religious grandiose delirium is thus developed, with admixture of motility symptoms. The patient recovered completely, but regaining his disease insight with respect to the first events of his illness was difficult and delayed, that the possibility of these occurrences had been familiar to the patient at the time of complete recovery. Finally I call to mind the doctor of philosophy, who had so drastically described the events preceding his admission. He had suddenly knocked off a strange gentleman's hat with his cane. This gentleman was a perfect stranger to him, really did nothing at all to him, but Dr. Sch. claimed he must have been a real black-guard, for God had suddenly caused the unpremeditated movement of raising his cane against him. It was the

matter of one of the patients, who believed themselves constantly hypnotized in the hospital.*

The jactatoid motor impulse of Mrs. W. might remind the superficial observer of cases of disease, which have an external similarity to hers, but are totally different in character. We will properly differentiate a perplexed motor impulse, to be called perhaps more correctly *perplexed motor restlessness*. In these cases an intense affect of perplexity leads to various movements, like changes in abode, restless wandering about, movements of embarrassment and despair, to monotonous moaning, clinging to other persons, etc. All these movements have the characteristic of psychological motive, if by an affect, which may be foreign to normal mentality, as e. g. in somatopsychical disorientation.

We have formerly become acquainted with motor discharges, which bore the stamp of senseless rage, as expression of somatopsychical perplexity. Here belong the peculiarly motived movements of the hypochondriacal patient N which are dangerous to life.

The aimless motor impulse then has an entirely different basis than that described above. In the latter the movements are primary and they lead to perplexity. In the sort of movements this relation is fully expressed. Whereas in the motor impulse of perplexity it behaves inversely. If the perplexity is increased to anxiety and despair, as in acute complete sensory psychoses, the psychological comprehension of the resulting motor manifestations has still fewer difficulties.

For the sake of completeness I will finally speak of a kind of motor impulse, which is the farthest removed from the motor, although it is often observed in the hyperkinetic motility psychoses. We may term it *hypermetamorphic motor impulse*. The same process, which imperatively directs the attention to present sensory impressions, must of course often lead to movements united to these sense impressions. Thus e. g. when a sight of the washing utensils or a tablet causes the patients to wash themselves or write on the

* See *Alienist and Neurologist*, Vol. XXI, p. 227.

tablet. In this way a rapid alternation of different actions may be produced and an independent motor impulse be simulated. The hyperkinetic motility psychoses, which is almost regularly accompanied by hypermetamorphosis, are, as stated, abundantly combined with those movements, but also with various delirious states, as *e. g.* those of progressive paralysis. If by isolation the sources of hypermetamorphosis are removed, this motor impulse always ceases.

I might use this occasion to speak of the so diverse and manifold conditions, which may induce an excess of movements in the insane. You know that a condition of greater or less frenzy is uncommonly frequent in acute insane and may be due to the most diverse causes. But the term frenzy conveys no diagnosis, it is merely the broadest, thoroughly popular expression for a restless condition.

The review of all the conditions, which may cause frenzy in the insane, will show that a concise definition of the hyperkinetic motility psychoses encounters certain difficulties. Therefore I have presented such detailed examples of a few especially pure cases. The primary movements not of psychological motive and the manifest impulse to such movements must always be able to afford our cardinal criterion. But it is in the nature of the affair, that especially high degree of intensity of the disease greatly interferes with a closer determination as to how far falsifications of consciousness as to content, not merely due to movements, exist, and even the subsequent information the patients give as to their condition, is often insufficient, because memory defects may obscure a part of the time of the disease to the patients. It will then have to be expected, that a part of the cases belonging here are more than a pure hyperkinetic motility psychosis, although they are comprehended as such according to the signs above described.

As to the *course* of the disease the following may be said, if the purest cases possible are taken for guidance. The disease seems to be distinguished by the fact, that it recurs in a number of periods—in the patients previously mentioned they were four—and then exhausts itself and terminates in complete recovery. The course is then periodically

intermittent, in very rapid sequence and short intervals at least periodically remittent. This periodicity is not perfectly uniform, but some attack, usually the first or second, is more protracted than the others, in a certain measure consists of the confluence of two attacks. Prodromes often precede the first attack, which may consist of subjective troubles of different sort, like headache, disturbed sleep, periodical anxiety and inner restlessness, but especially common vasomotor troubles. The attack generally begins quite suddenly, but when disease periods have preceded. The duration of the single attack is ordinarily less than a month, the protracted attacks mentioned are exceptions, which usually correspond to the maximum intensity of the disease. That the so-called periodical mania of authors belongs in the majority of cases to the hyperkinetic motility psychoses, I will here especially emphasize.

The periodical event of menstruation has the closest *etiological* relation to our disease. It is frequently met with in the puerperal state: puerperal mania of authors. It corresponds to the fact that the majority of the persons affected are women and young. Still if the disease occurs in the male sex, it shows the same periodically intermittent character, which then cannot be exclusively of menstrual etiology. The frequent cases of paralytic etiology form an exception in the periodicity of the course.

The confused mania usually periodically recurrent, soon to be more fully studied, alone needs to be essentially considered in *differential diagnosis*. It is decisive for the latter when the hyperkinetic disease type is merely an exaggeration of a pure mania and has actually been preceded by it. Besides mania is the only disease, which presents actual transitions to the hyperkinetic motility psychoses, and thus an inner relationship with the latter. Owing to this relation a differential diagnosis between the two diseases is sometimes impossible. More of this in speaking of confused mania. Later we will become better acquainted with the hyperkinetic motility psychoses as a phase of a cyclic motility psychosis and of periodical hyperkinetic states in the course of a total motility psychosis.

The *prognosis* of the disease is in general favorable, as I must state in opposition to most authors, in that most cases terminate in complete recovery under careful treatment after a number of periods. The hereditary or degenerative predisposition generally present is of no effect. Corresponding to the preceding pernicious factor the puerperal hyperkinetic motility psychoses are usually more severe than the menstrual. A bromide treatment, as has been recommended by Krafft-Ebing, has never been of essential service to me, nor in cases of menstrual psychoses. The special etiology is thoroughly decisive for the prognosis, so that the parietic form here leads to dementia, as in other parietic psychoses. This is true of the cases of hyperkinetic motility psychoses, which occur in the course of a real hebephrenia or other chronic, hebephrenic degenerative psychoses. The dangers of the hyperkinetic motility psychoses are chiefly the loss of strength from the constant muscular efforts and the ever present insomnia, to which the essential impairment of nutrition is often added by the continuous motor impulse. States of sudden collapse are therefore quite often observed. Further there are injuries, which the patient incurs and especially the difficulty of carrying out an aseptic treatment of these injuries.

Only in rare cases can the *treatment* be etiological. I remember a case of the kind, which corresponded to the boundary between our disease and confused mania. It was that of a 15 year old girl, who had not menstruated, but repeatedly presented vasomotor symptoms. The periodical recurrence of the attacks about every four weeks and the addition of vasomotor symptoms in the attacks caused me to apply in the third interval leeches to the inner surfaces of both thighs, by which the first menstrual flow was actually established and further attacks prevented. The girl has remained well since (about eight years ago). The employment of narcotics in the hyperkinetic motility psychoses is generally contraindicated. Almost all hypnotics fail. Hyoscine seems to have a specific action on the motor hyperkinesis, often in surprisingly small doses of $\frac{1}{4}$ - $\frac{1}{2}$ mg. given subcutaneously. Owing to this sedative action hyoscine

is also the best hypnotic in these cases. Besides bed treatment, in so far as it is practical, the employment of prolonged warm baths, permanent under certain conditions, are usually of favorable effect. Hospital treatment can only very rarely be dispensed with.

(To be continued.)

MIXOSCOPIC ADOLESCENT SURVIVALS IN ART, LITERATURE AND PSEUDO-ETHICS.*

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MINDS at a certain grade of culture are analogous with certain lands. They preserve archaic beliefs and acts in like manner as the lands preserve living fossils, representative of long extinct families and genera.† The phase of psychology to whose domain mixoscopia appertains, has many such survivals.‡

There is a primitive mixoscopic mentality Shelley depicted in the following stanza:

There are mincing women mewing
Of their own virtue, and pursuing
Their gentler sisters to that ruin
Without which—what were chastity?

This mixoscopia, much in evidence among female “reformers” of “Social Purity” type, is a survival of Beni-Amer culture.§ Here the females enjoy themselves alone gratuitously, while the husband must pay for any marital

* Continued from the *Alienist and Neurologist*, August, 1904.

† Kiernan, *Journal of Nerv. and Ment. Dis.*, 1882.

‡ Gomme, *Ethnology in Folklore*.

§ Crawley, *Mystic Rose*.

privileges and for every allegedly harsh word. He is often kept out on a rainy night until he pays. When a wife charges ill treatment the husband is always in the wrong and the other females rush to her aid. Beni-Amer females have such contempt for the male as to regard any woman disgraced who loves her husband. This seems a reproduction of the caricature Besant drew in "The Revolt of Man," yet it exists among Mahommedans.

Sex solidarity has arisen from mixoscopia resultant on dread of woman as an attractor of spirits seeking reincarnation. Woman according to primitive biology, is the medium through which disembodied spirits re-enter life. According to this biology there is a struggle for re-incarnate existence between spirits, from which has arisen, as Harriet Alexander* has shown, a system of taboos affecting mother and child. This attraction of woman for spirits seeking incarnation has created sex solidarity as a means of male protection among primitive races.

In symbolic form it survives in prejudices against free association of sexes under conditions seemingly destitute of esoteric significance. There is, Crawley forcibly remarks, a close parallel, not merely humorous, between primitive institutions and modern club etiquette. The occult is not obtruded in the male club, but flourishes in full luxuriance in the female, which generally has the mental atmosphere of the Beni-Amer viragoes. Mixoscopic zeal for reforming males is so great as to overwhelm social functions of the club. More than one level-headed woman has expressed the opinion that for this reason women are not clubable in the Johnsonian sense. Female clubs, unlike the male, are a source of unrest, not calm. Sex antagonism, which founded the primitive female club, is strongly in evidence in the mental atmosphere of the modern woman's club, which is overcharged with primitive hysteria.

Dread of woman as a spirit attractor, aided by her labor and slave-producing value, checked that evolution of romantic love already present in birds and mammals, which, as biologic-psychologists have pointed out, is one if not the chief source

* *Medicine*, 1904.

of altruism. Enforced sex equality in labor, the ideal of female "reformers" sank the mother in the laborer or chattel. This produced social states beneath birds and mammals like those of the "bee" communities, where drones and queens reproduce while imperfect "females" are the autocrats. In the ideal of the female club "reformers" a few females (whom, with the Beni-Amer viragoes they regard as degenerates,) are to propagate the race, and then they and the males are to be removed, the imperfect female meanwhile reconstructing the world on this degraded bee plan. Evolution, however, has produced the nobler Tennysonian picture, according to which woman will clear away the parasitic forms

That seem to keep her up but drag her down—
Will leave her space to burgeon out of all
Within her—let her make herself her own.
To give or keep, to live and learn and be
All that not harms distinctive womanhood;
For woman is not undeveloped man
But diverse, could we make her as the man.
Sweet Love were slain; his dearest bond is this,
Not like to like, but like in difference.
Yet in the long years liker must they grow;
The man be more of woman, she of man;
He gain in sweetness and in moral height;
Nor lose the wrestling thews that throw the world;
She mental breath, nor fail in childward care.
Nor lose the childlike in the larger mind;
Till at the last she set herself to man
Like perfect music unto noble words.

The aim of Tennyson's Princess was the noble one of equal opportunity for the sexes in the search for truth. The female apian reformer is deeply infected with a pseudo-modesty which would emasculate biologic facts in co-education, permitting only such biologic knowledge as the narrowest "prunes and prism" monogamous sultanas discuss in public.

Private coarse discussion by such pruriently prudish viragoes quite early in evolution degeneratively influenced language through sex segregation. In Madagascar certain terms are proper for women to use to their own sex only, others

for women to use to men, and others for men to use to women. The Guaycuras reserve certain words and phrases to women exclusively. This is also the case in Surinam. In Fiji for the proper term for a newly circumcised boy; *trev*, *kela* must be substituted when women are present. Many other words are forbidden in female society and the same is the case in Micronesia. In Japan female writing has a different syntax and many peculiar idioms. The Japanese alphabet has one set of characters (*kankana*) for men and one set (*hiragina*) for women. In Abipone certain words vary according to sex. The Island Caribs have vocabularies used by men and by women when speaking to men, and others used by women when speaking to each other, and by men when quoting a woman. Their councils of war are held in a secret jargon in which women are never initiated. Similar phenomena are evident in all languages derived from those of Europe. Even in English, where sex differences are least artificial, this influence appears in words like poetess, doctress, etc., but such inflections are disappearing. German results of these sex inflections have the ludicrous aspect portrayed by J. K. Jerome* in what is far from a caricature.

The name of primitive man, as J. G. Frazer points out,† is a vital part, and so is the name of any part of the body. Sexual taboo has, in this connection, developed decidedly inhibitory influence on terse expression. The Hindu wife must always speak of her husband by a circumlocution, never using his name; this is also the case with the Barea women. For a Kirghis woman to mention the name of a male is indecent. The Zulu woman under the same restrictions as the Hindu woman, may not use the interdicted words in their ordinary sense. Women transgressing this rule are "smelt out" by the witch-finder and punished with death. The woman's language consequently has a large vocabulary. The Solomon Islanders reluctantly use a woman's name; when prevailed upon to do so only use a low tone, as it is too sacred to speak loudly. In the Pelew Islands

* *Three Men on a Wheel.*

† *Golden Bough.*

the same condition obtains as well as among the Todas. For a husband among the Californian Nishiniamis to call a wife by name is equivalent to divorce. No one in this tribe can divulge his own name without danger.

Primitive feminine desire for dominance appears in the attempts of the California Amerinds to keep their women in check. The Hottentot women can defend themselves and avenge wrongs. The Fulah governs his wives by force, but they recoup themselves when possible. The Brazil Amerinds, in wholesome dread of their wives, adopt the maxim of *laissez faire* as to their intrigues. Fire-making among the Wataveita is not revealed to women because "the Miris will not allow them to be too strong-minded." The Fuegians celebrate a festival in commemoration of a successful revolt against the women who formerly had the authority and possessed the secrets of sorcery.

The sorcerer's "bone" is pointed by the Diori of South Australia at their wives for alleged wrong acts. The threat of this pointing the women dread, but it causes them to hate their husbands. The Pomo Indians of California can only maintain authority over their wives by impersonating ogres, after which the wife is tractable for some days. The Yaru Indians of California have a male secret society to keep women in order. Similar secret societies are found not only on the Pacific coast, but likewise in Africa.

Women form associations in which they discuss their wrongs and plan revenge. These are most common in Africa, and among certain tribes are much feared by the men. The Roman "Bona Dea" was clearly such a society. Among the Bedouins of Libya, women associate mostly with their own sex. In Morocco women are by no means reserved when by themselves, nor do they seek to cover their faces. Amongst the Gauches of Uruguay women show a marked tendency to huddle together. Were a Tasmanian wife struck by her husband the whole female population would bring the "rattle of their tongues to bear upon the brute." The ill-treated Kaffir wife can claim an asylum with her father till her husband has made atonement. Nor would European husbands like the discipline usual on such occasions. The

offending husband must in person ask for his wife. He is instantly surrounded by the women of the place, who cover him at once with reproaches and blows. Their nails and fists may be used with impunity. It is the day of female vengeance. The belabored delinquent must not resist. He is not permitted to see his wife, but is sent home with an intimation of how many cattle he must send before he can demand his wife again. The Kunama wife has an agent who protects her against her husband and fines him for ill treatment. She possesses considerable authority in the home and is on equal terms with her husband.

If a Nukahiva woman sits upon, or even passes near an object which has become taboo by male contact, it can never be used again, and she is killed. Tahiti women must respect places frequented by men, their weapons and fishing tackle. The head of a husband or father is sacred from the touch of a woman, nor might a wife or daughter touch any object that has been in contact with these tabooed heads, or step over them when their owners were asleep. A Solomon Islander man will never pass under a tree fallen across the path, because a woman may have stepped over it before him. In Siam it is unlucky to pass under women's clothes hung out to dry. It degrades a Melanesian chief to go where women may be above his head. Boys are forbidden to go underneath the woman's bed place. The Karens of Burmah avoid going under a house in which there are females. In Burmah generally it is an indignity to have a woman above the head. Amongst the Rajmahals, if a man be detected sitting on a woman's cot and she complains, he pays her a fowl, which she returns. If a man detect a woman sitting on his cot, he kills the fowl which she produces in answer to his complaint and sprinkles the blood on the cot to purify it, after which she is pardoned. In Cambodia a wife is not allowed to use the pillow or mattress of her husband, lest "she hurt his happiness thereby." In Siam the wife has a lower pillow.

Among the Barea, man and wife seldom share the same bed, lest the breath of the wife during sleep weaken the husband. The back of the house among the Lapps is sa-

cred to the sun and must not be touched by an adult woman. The house of a Maori chief must not be entered by a woman. Amongst the Kaffirs husband and wife meet at night only. The wife is secluded during the day in the interior of the house which the husband must not enter. A public resort is set apart for the husband where no woman must enter under penalty of three years imprisonment. In some Amerind tribes, particularly those of California, a man must enter his wife's wigwam after dark only. The men's club house must not be entered by women. No man of good reputation will enter the woman's part of the Bedouin tent or even be seen in its shadow. The houses of the Nukahiva chiefs are not accessible to their wives, who live in separate huts. A Samoyed or Ostyak wife must not enter any of the tent except her own corner. After pitching the tent she must fumigate it before man can enter. It is against Fijian delicacy for a man to remain under the same roof with his wife or wives at night. He must sleep at the public bures of his village. The women and girls sleep at home. Meetings between husband and wife are arranged in the depths of the forest unknown to all but the two. The whole male population sleeps at the bures or club houses of the village. There are generally two. Boys have a special one. Women are not allowed to enter these bures. In New Caledonia men and women do not sleep under the same roof. The wife lives and sleeps by herself in a shed near the house. The men and women rarely talk or sit together. The women seem perfectly content with the companionship of their own sex. The men who loiter about with spears in a most lazy fashion are seldom seen in the society of the opposite sex. No Hindu female may enter the men's apartments. In New Guinea the women sleep in houses apart, but near those of their male relatives. The men assemble for conversation and meals in the marea, a large reception house, which women may not enter. Amongst the Nubians each family has two dwelling houses, one for the males, the other for the females. In the Sandwich Islands there were six houses connected with every great establishment: one for worship, one for the men to eat in, another for the women,

a dormitory, a house for kapa beating, and one where at certain intervals the women might live in seclusion. The Caroline Island chief's establishment had one house for the women, a second for eating and a third for sleeping. In the Admiralty Islands a house is reserved in each village for women, married or single. The single men live together in a separate building. The Shastika of California have a town lodge for men and another for women. Other California tribes have the first institution; the women may not enter the men's lodges. The center of Bororo life is the baito, the men's house, where all men live. The family huts are merely a residence for women and children. Amongst the Bakairi and the Schingu women never enter the club house, where the men spend most of their time. In the Solomon Islands women may not enter the men's tambu house, nor even cross the beach in front of it. Ceram women are forbidden to enter the men's club house. New Britain has two large houses in each village, one for men, the other for women. Neither sex may enter the house of the other. In the Marqueses the club house where the men congregate and spend most of their time is taboo to women, protected by the penalty of death from the pollution of woman's presence. The chiefs never bother about domestic affairs. In the Pellew Islands the sexes are separated. Men and women hardly live together and family life is impossible. Segregation is political as well as social. In the Society and Sandwich Islands women were isolated by taboo and lived almost entirely by themselves. In Uripiv (New Hebrides) sex segregation begins in part soon after a boy is born.* In Rapa (Tubuai Islands) men are taboo to women. Seoul, Corea, has a curfew law called pem-ya. A large bell is tolled about 8 p. m. and 3 a. m. daily. Between these hours only women are supposed to appear in the streets. In the old days men found during hours allotted to women were severely punished. Family life is practically non-existent in Corea.

Among the Ojibways and the Senegambians women formed cliques similar to those found in women's clubs and societies whose object is sex antagonism. This antagonism

* Golden Bough.

appears in the methods by which the Princess attempts to secure both equality of opportunity.

Here, as elsewhere in folklore, changes through decay, degradation and misapplication occur along the generative line. From these changes result symbolism, substitution and amalgamation whose sex influence on language is peculiarly evident. The Queenslanders have a decent and indecent vocabulary. One word for vulva can be used in the best aboriginal society. Another designation is considered very coarse. Through such changes titles become mere part designations or acquire offensive significance. The term *cunnus*, derived from a Greek verb, (meaning to conceive) without offensive significance has become in Teutonic tongues a very coarse cognomen for the vagina. *Clitoris* (derived from a Greek word, meaning to grope the pudendum lasciviously), has become an organ title without objectionable significance. Designations of the female in the Teutonic tongues have undergone similar changes. *Weib* and "woman" have a much higher status as designations than *frau*. In English frowzy evinces extreme contempt. Modesty, according to Celine Renooz*, "is masculine shame attributed to women because man believes that woman is subject to the same laws as himself, and because the course of human evolution has reversed the psychology of the sexes, attributing to women psychologic results of masculine sexuality. This is the origin of the conventional lines which by a sort of social suggestion have intimidated woman. They have, in appearance at least, accepted the rule of shame imposed on them by men, but only custom inspires the modesty for which they are praised. It is really an outrage to their sex."

For this outgrowth of sex solidarity woman is nearly as responsible as man, since her conservative tendency has enabled the conventional, mediocre and the *poseuse* to dominate at the expense of individuality.

The claim that "this reversal of psychologic law has not been accepted by woman without a struggle, and that primitive woman, proud of her womanhood, has always defended her nakedness which ancient art has always represented,"

* Psychologie Comparée de l'Homme et de la Femme.

is erroneous except so far as nakedness or clothing is representative of the conventional. Clothing originating for ornament created conventional modesty. Even today ornamentation of under garments suggests to certain socially "pure" bourgeoisie minds immorality. Until comparatively recent years under garments were regarded as expressions of immodesty. In England, as Havelock Ellis* remarks, the use of drawers, almost unknown half a century ago, was then considered immodest and unfeminine. Tilt† advocated such garments made of fine calico and not to descend below the knee on hygienic grounds. "Thus understood," Tilt remarks, "the adoption of drawers will doubtless become more general in this country, as, being worn without the knowledge of the general observer, they will be robbed of the prejudice usually attached to an appendage deemed masculine." The *Ladies' Home Journal*, half a decade ago, decided to avoid in future all reference to underlinen, because "the treatment of this subject in print calls for *minutiæ* of detail, which is extremely and pardonably offensive to refined and sensitive women."

"The young girl of today," according to Celina Renooz, "has a moment when by a secret atavism she feels a pride in her sex, an intuition of her moral superiority, and cannot understand why she should hide its cause. Wavering between the laws of nature and social conventions, she scarcely knows whether nudity should or should not affright her. A confused reminiscence seemingly recalls a period ere clothing was worn and as a paradisiac ideal the customs of that time." Such a moment occurs during adolescence, but it hardly has the esoteric significance assigned by Renooz. It is one of the many expressions of volitional instability whereby two phases of a subject arising at once in the adolescent mind create uncertainty. In some instances this state remains as a Narcissus-like auto-erotism. In others it becomes a mixoscopic pseudo-modesty, through which certain neurotic women view their naked persons with horror. It does not always go to this extent, but creates that niceness which

* Havelock Ellis, *Psychology of Sex*.

† *Elements of Health*, 1852.

overlies nastiness of conceptions anent physiologic and anatomic facts. The primitive mind of the Beni-Amer survives in the harlot, to whom aught but sentimental literature is a horror, and who sees coarseness in any literature dealing with the real. Sentimentality takes the place of deeper emotions in criminals and defectives, whether harlots, "money-makers on principle," or "Mothers in Israel." To these last, as to the Beni-Amer female, marital relations are for business consideration only. Any other view of them by a woman is indecent and disgraces her sex. While this pseudo-modesty may occur in a healthy woman from environment, it disappears with the disappearance of sex antagonism, as Tennyson has beautifully portrayed in the Princess:

She stoop'd, and out of languor leapt a cry,
Leapt fiery passion from the brinks of death
And believed that in the living world
My spirit closed with Ida's at the lips;
Till back I fell, and from mine arms she rose
Glowing all over noble shame; and all
Her falsèr self slipt from her like a robe
And left her woman, lovelier in her mood.

Clothing influenced modesty in a manner, somewhat dependent, as Havelock Ellis has shown*, upon concealment of factors tending to arouse disgust. Fear of arousing disgust, naturally combines easily and perfectly with any new development in ornament or clothing as sexual lures. Among civilized races, feminine garments (as sometimes perfumes), aim at both concealment and attraction, equally with the little apron of the primitive belle. The apron was an evolution of the famous natural apron of the Hottentot† due to hypertrophy of the labia and nymphæ. The more coquettish of the Hottentot girls practiced artificial elongation of the nymphæ and labia. They pulled, rubbed and stretched the parts by hanging weights to them. They spent several hours at this, an important part of the Hottentot belle's toilet. The malformation is an attraction to the male by concealing and suggesting

*Psychology of Sex, III.

†Gould's Anomalies.

more than pure nudity. Among the Basutos, the elder women begin labial manipulation on girl infants. Like customs obtain in Dahomey. The Lake Tanganyika women manipulate the skin of the lower part of the abdomen of girls from infancy. At puberty a cutaneous curtain over the genitalia has resulted, which reaches half way down the thighs.

The idea of the warding off dangers from spirits, cannot be excluded in these practices. The sensitive instinct of self-preservation and of self-realization plays a part here. Desire and disgust are curiously blended when, with desire unsatisfied, the satisfaction of another is evident. Here, as Crawley remarks,* may be seen the germ of an altruistic stage. This has two sides; the fear of causing desire or of disgust to others. These two fears naturally suggest their antitheses. Heightening of attraction is a logical outcome and association of the fear of evoking disgust. When the altruistic element is more developed, the contrasts intensify the desire of attraction, causing coquetry. This condition may have as predominant note, disgust, with an attractive face, constituting mixoscopia, as well as the condition in which desire for admiration dominates.

A civilized European woman, naked in the presence of others, feels: "I am ashamed, not because I am nude, but because I am unadorned." She does not feel her beauty is revealed, but that she has lost her weapons of seduction. All motives combine to concentrate modesty on the garment, as at one time they did to concentrate modesty on the Hottentot apron. Clothing once established, growth of the private ownership idea of women, emphasizes its importance and increases woman's anatomic modesty. Diderot, Waitz, Schurtz and Letourneau† claim that jealousy of husbands is the primary origin of clothing and indirectly of modesty. In relatively primitive races, married women alone are the only ones clothed, while full grown unmarried women remain nude. Where men are naked and women covered, clothing disgraces the male. Before marriage,

*Mystic Rose.

†Evolution of Marriage.

woman relatively free as tribal property, has not yet become private like land by enclosure. To the husband's mind, the garment seems a moral and physical protection against an attack on his property. The property idea creates practices still more emphatically turning the nymphæ into chastity guards. These still crop up among European races, noticeably among the Germans, who retain so many oriental ideas of women. In 1894, H. L. Collyer, of New York,* reported to the Academy of Medicine a locking of the nymphæ practiced on a young woman by her husband during his periodic absences.

The woman, who was 28 years old, had been married ten years. When she and her husband came to America, he adopted the following method of protecting his property: He first perforated the labia minora and, after subsidence of pain and swelling, introduced a small padlock, which remained in place until his return from his route as commercial traveler. He had practiced this six years. In other cases Collyer knew of the use of buckles over the nymphæ. This was the only one where perforation and locking the nymphæ had been discovered. The procedure was at one time not very uncommon in France and Germany. It has been frequently satirized, especially by Voltaire.

A new, somewhat artificial tendency thus occurs to increase the disgraceful conception of female nudity. As the conception of property is involved in the father's rights over his daughters, commercial appreciation of female chastity develops. Locking of the nymphæ is for this reason enforced by usage among the Somalis. The seven-year-old girl must submit to a plastic operation by the priest. He pares the edges of the labia majora upwards of three-fourths their length in the anterior posterior direction, by forefinger and thumb of the left hand. Effecting coalescence of the parted margins, he fixes them by three stitches. The needle is a wooden one, smoothly hewn from the trunk of a tree. The thread is a coarse, thick twine twisted from its bark. A very small opening is left for menstruation and urination. After the operation the girl is

**Medical Record*, Dec. 1894.

placed on a mat on the floor of an abode of very frail temporary construction. She lies for several days, her legs tied together, with no dressing except a rag used for covering, until the parts unite. Girls are generally married at 12. The duty of breaking through the dam devolves upon the bridegroom.

This commercial appreciation of female chastity, affecting unmarried and married women alike, is probably the chief addition to the complex emotion of modesty, made by the barbarous stages of civilization. The mixoscopia created by the decadent aspects of this commercial factor, exerted an exceedingly pernicious influence on the mentality of the Celtic-speaking races, which played such an enormous part in English-speaking culture,* markedly affecting even the language.† To them, in no small degree, was due the origin of the renaissance. The missionaries of St. Patrick and St. Columba founded the germs of the older European universities, which were in touch with the Greek culture. The arts, inclusive of music, were stimulated. The harp, not the cacaphonous bagpipe, was the great Celtic instrument of harmony. The race was emphatically one of individual freemen. The Breton law, in its respect for individual right, was the English common law freed from contradictory judicial Roman law distortions and incongruous judicial dicta based on obsolete and repealed statutes. The overlords of the Celtic federal system were elected in much the same manner as the heads of the English-speaking communities are today; either for a term of years or, as in Great Britain, as a dynasty.

Modern English sovereignty, as Demoor remarks,‡ is chiefly a decorative institution. The real head of the government, is the Prime Minister, nominated in theory by the sovereign, in fact, by the people. This system is the survival of the old elective institutions. The formality of an election disappeared during the Tudor period. The coronation of Henry VIII, was the last time the formula was read which set forth national agreement with, and recogni-

*Lang: *Origin of Universities.*

†Henry Morley, *English Writers.*

‡Evolution by Atrophy. p. 242.

tion of the succession. The king was, in fact, declared chosen and elected. This election formula, which disappeared after the coronation of Henry VIII, seems to survive in the conclusion of the modern coronation ceremony. The Archbishop of Canterbury, walking in succession to all four corners of the platform upon which the throne is placed, addresses the people in the following terms: "Gentlemen, I herewith present to you the undisputed sovereign of the realm. Come all who are present and offer homage to him. Are you prepared to offer it?" And the people signifying their accent by acclamation, cry, "God save the King!"

Disappearance of the elective formula was due to the extensive powers of regulating the succession assumed by the parliaments of Henry VIII with his consent. Through the precedents thereby established, (which were based on previous precedents), the statute on which the title of the present Hanoverian dynasty rests, was passed. The English sovereign reigns as the representative of an elected dynasty. The Irish system, which disappeared when Brian Boru fell, was identical. His nephew, Thomas, attempted to usurp the elective throne, but was repulsed and died in Rome, bequeathing his non-existent rights to the Pope, who transferred them to the Normans as a reward for extirpating the church of St. Columba.

The Celtic-speaking races held to that sex equality, rather than proprietorship in women, which dominates American thought to-day. Even in their days of barbarism, remarks Havelock Ellis,* the Celtic-speaking races were peculiarly free from the idea of proprietorship in women. Their women were highly honored. In Celtic poems they usually took the initiative in love. In French lyric poetry of the 12th century, largely infused with Celtic spirit, love, remarks Bowden,† was an affair for the woman. It was she alone who made a confession of the heart. The influence of the mixoscopia underlying proprietorship in woman, as shown in clothing, appears in the fact that among the Irish, always distinguished by tenacious adherence to the spirit of racial

* *Psychology of Sex*, III.

† *History of French Literature*.

and national customs, the custom of nakedness was probably longest preserved among the upper social classes in Western Europe. The pictures drawn by Meryson* indicate this and the deep-seated purity underlying it.

There has been a marked change in the Celtic-speaking peoples. The Celtic joyousness of life and deep sense of purity of physical expressions of affection have given way, particularly among the Irish, to a coarse commercial Philistinism. This change stabs Celtophiles of culture, like George Moore† and Fiona Macleod.‡ The Celt, remarks Fiona Macleod, "has at last reached his horizon. There is no shore beyond. He knows it. This has been the burden of song since Malvina led the blind Oisín to his grave by the sea. 'Even the Children of Light must go down into darkness.' But this apparition of a passing race is no more than the fulfillment of a glorious resurrection. For the genius of the Celtic race stands out now with averted torch and the light of it is a glory before the eyes and the flame of it is blown into the hearts of the mightier conquering people. The Celt falls, but his spirit rises in the heart and the brain of the Anglo-Celtic peoples with whom are the destinies of the generation to come. The Breton's eyes are slowly turning from the sea and slowly his ears are forgetting the whisper of the wind around menhir and dolmen. The Cornishman has lost his language and there is now no bond between him and his ancient kin. The Manxman has ever been the mere yeoman of the Celtic chivalry, but even his rude dialect perishes year by year. In Wales, a great tradition survives; in Ireland, a supreme tradition fades through sunset-hued horizons to the edge of o'dark; in Celtic Scotland a passionate regret, a despairing love and longing, narrows yearly before a bastard utilitarianism which is almost as great a curse to the despoiled land as Calvinistic theology has been and is."

"The art and literature of the fifteenth and sixteenth century," remarks George Moore, "were due to a sudden dispersal, a sudden shedding of the prejudices and conven-

* Itinerary.

† The Untilled Field.

‡ The Sin-Eater.

tions of the middle ages. The renaissance was a joyous returning to Hellenism, the source of all beauty. There is as little free love in Ireland as there is free thought. Men have ceased to care for women and women to care for men. Nothing thrives in Ireland but the celibate, the priest, the nun, and the ox. There is no unfaith, and the violence of the priest is against any sensual transgressions. A girl marries at once or becomes a nun—a free girl is a danger. There is no courtship, there is no walking out, and the passion which is the direct inspiration of all the world's music and art is reduced to the mere act of begetting children."

All the poetry and ethic sense of life would vanish, were as Maudsley* forcibly remarks, man deprived of that spirituality which springs from the sex relation. That sense of the altruism of sex affection led Spurgeon† to declare in a sermon that sensuality, by a strange yet natural law, was placed close to spirituality. Modern mixoscopia which degrades sex affection arose in this antique commercialism. The coexistence of the antique prejudice against old maids with a prejudice in favor of conventional chastity which refuses to give itself except to the highest bidder under legal or religious forms, is decided evidence of this. That bastard utilitarianism has had marked influence on the Celtic peoples is undeniable. The coshering of the expelled chiefs on the starving clansmen which Stevenson depicts in "Kidnapped" created parasitism of that worst type wherein patriotism is the last refuge of a scoundrel. In Ireland the anglophobic for revenue only is a sturdy fungus growth. It has been a patent force in the rotten "business" phases of American politics. The "green flag and an appropriation" is the chief creator of the Irish boodle "politician" so nauseating to the Celt permeated with the old ideals of the race. Such "business" principles rot and vanish into a coarse mixoscopia, sex altruism, thereby causing the race suicide so vividly described by Moore. The commercial decadence of the Celt thus created has led to an ancestor worship, which makes nun and priest of daughter and son, to save a valueless soul imperilled by "patriotic" and other "boodle" practices.

* *Physiology of Mind.*† *Chicago Medical Review*, 1881.

THE LOUISIANA PURCHASE EXPOSITION, THE NEURASTHENIC AND THE BRAIN-TIRED.

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THE "Exposition grounds are approximately in the shape of a rectangle, two miles from E. to W. and one mile from N. to S., made up of four distinct parcels of ground, aggregating 1,240 acres. The greater portion of the Fair is in the W. half of Forest Park, one of the largest of the public parks of the great cities of the United States. The E. half of this park has been kept intact. The Forest Park section of the Fair comprises 668 acres. It was the first portion of the site acquired, and on it are built eight of the big exhibit palaces. W. of the Forest Park section is the Skinker tract acquired from private owners, the principal of whom was Thomas Skinker. It covers 422 acres. On it are located the Palaces of Agriculture, Horticulture, Forestry, Fish and Game, the Philippine reservation, the big Floral Clock, the plant Map of the United States, the United States life-saving exhibit, the Ethnology building, and the National pavilion of France. An additional area of 110 acres just N. of the Skinker tract was leased from Washington University. On it are built the majority of the foreign pavilions and the Administration group of permanent buildings. E. of the University tract and N. of the Fair Grounds is the Catlin tract, which contains sixty

acres, which is used for concessions. The Pike runs the entire length of this tract, a distance of nearly a mile.

"The architectural feature of the Exposition is mostly made up of eight vast exhibit palaces and two miles of lagoon. Picturesque building and verdure-covered hills help the effect. This is on a level area surrounded on two sides by high hills. These hills are not continuous, but jut out at four points. These jutting prominences are used with fine effect in the decorative scheme of the Exposition. The first of the prominences is crowned by the United States Government building. Two others, with the connecting ridge, form the Cascade effect. The remaining prominence is crowned by the national pavilions of Japan.

The two central prominences, which are connected by a semi-circular ridge, lead to the lower level of the grounds by a finely sloping hollowed declivity. This natural feature was used by the Exposition architects for what is pronounced by critics to be the greatest architectural water and garden composition ever executed by man, the Cascades and the Cascade gardens. The declivity below the Cascades is occupied by lawns and gardens of exquisite design. The hill is reached from two of the avenues of the main picture by a long approach flanked by portrait statues of the great men who have helped in the development of the Louisiana Purchase.'"*

If, then we consider only the magnificent distances and multiform attractions of the Louisiana Purchase Exposition, and the expenditure of neuropsychic and muscular force necessary to see and hear them completely, we should say, *prima facie*, the neurasthenic should not go there. Its actually more than two mile square area of attractions (including its enclosure and Forest Park and its environments and the Lewis building and searchlight to the northwest), if encompassed with the usual eager sightseeing haste, will exhaust the strongest and are liable to collapse the neurasthenic, if attempted in the usual hasty way. Six weeks are none too much of time for the strong, and a hundred

*This description is taken mainly from the Official Guide, which contains about 200 pages more of description.

one or two-hour visits in as many days, would better suit the brain-fagged and nerve-strained.

But the neurasthenic will go to the World's Fair, as well as the strongly nerve-centered, and we should guide him on his way, if we can, against unrecuperable exhaustion, as we shall have him to treat, if he escapes our friend, the man of the black pall and plume, at the conclusion of his Exposition experience.

The true neurasthenic is a neurone asthenic, a psychic neurone asthenic. One whose psychic neurone waste and repair balance has become deranged. He is the man or woman who "does things," or who "has done things" or tries to do things, or has tried to do things too often to the point of abnormal, not readily daily recuperable exhaustion, as would come to the neurally healthy—that is, the true psychic cerebrasthenic neurasthenic, is so. His neurotic restlessness makes him restive and prompt to exertion even after the time in action for rest is reached, as distinguished from the neurasthenic from excessive passionate indulgence, such as the venereal or alcoholic neurasthenic, who usually has complicating troubles.

The clinic picture, with portrait of the late Professor Gross of the Jefferson Medical College, on exhibition in the art section, a picture of blood, with the horror-stricken mother in a side light in an attitude of despairing shock and grief, is not a good picture calculated to help toward recovering the sanguiphobic neurasthenic. Cutting down upon a necrosed bone or on an artery for ligation is never a cheerful picture to any onlooker, and not especially so to the most hopeful patient, unless he takes an anaesthetic pleasantly and passes soon into dreamy forgetfulness, much less to morbidly unstable nerves, as in neurasthenia.

The painting is one of Thomas Eakins' best among many good productions there on exhibition. The eminent surgeon's expression, intent upon his task, like a veteran warrior commander amid the carnage of battle, indifferent to all else, though lives about him are shattered and hearts bleeding, is true psychologically to nature. The picture, however, does not meet the requirements of either modern

psychiatry or surgery, for the operators all have on their ordinary clothes, the principles of Lister are not in evidence in the proceeding, and today the poor, despairing mother would not be permitted in the operating room.

The complimentary picture of D. Hayes Agnew in the amphitheatre by the same artist, in the same hall, represents an operation under more advanced aseptic precautions. The picture must have been painted towards the close of the session, with a senior class for an audience, for many of them showed tired faces, and some are asleep and some appear to be developing that pathological neurasthenia, which is too often the sequence of the modern medical colleges' exacting and exhausting curriculum, especially where the students are so imprudent as to indulge in engrossing side pleasures in late night hours, in addition to the exacting study college duty demands.

The picture of Gross and Agnew, coupled with the biography of their regular, steady, driving, striving, systematic lives are a defiance of that premature neurasthenia, such as befalls the less systematic and prudent worker in the fields of medical endeavor. They worked much, but they rested betimes and were not worn out by those vices and indulgences which exhaust so many. If you would see the picture of another great and long-lived surgeon, see that of Sir James Paget, in the British Pavilion. Its tranquil face, like that of the imperturbable artist who painted it, will rest you while you look upon it and them. Non-neurasthenic tranquility and psychic power and composure beam from those faces.

To the man of ceaseless demands, the man of affairs, the weary and heavily laden professional, business or domestic burden bearer in this strenuous age, diversion is recuperation, and recreation is rest and may be made to conduce to recuperation, even at a great Universal Exposition like the World's Fair at St. Louis is. But to conduce to this end its attractions should be taken slowly and in moderation, with the length of weeks and months expended upon them and not by a few days of brain-racking sight seeing. Not by trying to encompass its wondrous exhibits or com-

prehend its numberless world studies in limited days or even weeks, can he or she of meager nerve power reserve, do it without self-harm, but by doing the observation of its cosmic wonders with leisure and discrimination, diverting and resting the mind and adequately feeding and sleeping the body between visits to its thousands of entertaining and instructing and mind-diverting attractions, and by blending its tranquilizing, soothing and refreshing adjunctive influences with its wondrous sights.

The lagoons, the native environing forests to be seen from the windows of the Intramural railway, the automobiles and rolling chairs and ginrickishas of the grounds are restful, and so likewise the different plazas and the Filipino reservation and Press Club porticos and views therefrom.

The brain-weary should take in the Pike with extreme moderation and deliberation and, only at times when the brain is most refreshed, as early in the morning, after a previous night of prolonged, refreshing sleep. No neurasthenic should attempt, or anyone else of discretion, to do the Pike in a single day. Visits to the most exciting scenes, like the Galveston Flood, the Boer War and the Naval Battle should be followed by a round of the lagoons or on the Intramural railway, or by a visit to Old St. Louis or the Tyrolean Alps or to the North Pole or Under and Over the Sea, to Creation or the Plazas or the Government Fisheries building or to Jim Key, the educated horse, or to the Old Plantation. Certain neurasthenics should avoid the Boer War and the Naval Battle entirely, while the hypochondriac and the melancholic might see them under judicious neurologic advice; likewise the scenic railway, the shoot the chutes, the aerial leap, etc., etc. The neurasthenic brain-strained should not attempt to take in some of these most exciting battle scenes until several weeks after of recreation or restful sight-seeing, such as may be realized in some of the State buildings each day in close proximity, and on the gondolas or launches of the lagoons or in the Agricultural and Horticultural buildings or the buildings of the Model City, if indeed he should venture in sight of them. The

Ferris wheel would not be a suitable experience for the neurasthenic with a fear of great open space.

The Philippine parades are interesting and restful, as all the exhibits, educational and domestic of these people are instructive, as well as the Government Filipino exhibit and War Department exhibit here. Likewise the panoramic trip to the Philippines, the Solarium, and Frigidarium.

The Dairy Farm barns and Commercial Poultry Farm and other farm shows and fruit exhibits are enough for one day for the weary visitor from the country on the first day of arrival, and too much for the brain that is unhealthily tired, that is, neurasthenic. The lagoons in the evening, a restful view of the Cascades and a round of the lagoons and Intramural railway is enough for the brain and body-wearied for one day, and better for the first day at the Exposition for any one.

The Exposition may be viewed with less fatigue by approaching it first at the southeast gate or at the Administration building entrances of the Transit or Suburban systems, instead of the Main or Lindell entrance, going to the State buildings, especially to your home State building, registering and resting there. This gate is called the States Entrance gate, though not all the State buildings are in that vicinity. The California, Illinois, Tennessee, Virginia, Idaho, Maryland, Montana, Oregon, Maine and Fraternal buildings being further west. But the ground is high here, almost on a level with the Terrace of States, the Festival hall, the Fine Arts hall at the top of and behind the Cascades, distant about half a mile, and the German building near by. Here, on this level, the visitor who must economize his strength and who will, if not possessed of a surplus of reserve nerve energy, may spend a day in viewing, from an eminence, the grandest aggregation of architectural beauty, combined with an unequaled aesthetic panorama of Nature ever portrayed in the same space, through instrumentality of the head and heart and hand of man. From here, looking north in the distance one mile away, but appearing farther than it is, one may see the snow clad Alps and Blarney Castle of Ireland and, in the valleys below, the waterways and gon-

dolas between the Art palaces, as if one were actually viewing them in Venice. Here are also the more modern and more rapid electric launches. Only Ireland dissipates the pleasing illusion that the real Alps are before you in all their snowy sunlit or moonlit beauty in the distance. From near where you stand ripple and dance and sparkle in electric light the illuminated Cascades, down the statuary and column-skirted stairway. In front, and on either side, are green velveted sward and waterways, the beautifully artistic bridges spanning them and the magnificent buildings, each of a different style of construction, lining the streets and holding samples of the world's greatest treasure in fine art, handicraft, varied industries, productions and inventions, including our own Government's matchless display and the great De Forest Wireless Telegraph Tower, the Model City and the Sunken Gardens to the northeast and Machinery Gardens to the northwest.

The entire ensemble of this sight at twilight, or later when electric lights of gold and green and red, mingled with soft searchlights, are shown in effulgence, is an enchanting, yet tranquilizing scene of quiet beauty never before beheld in this world, far surpassing the wonderful electric tower at Buffalo, and not equaled by the Alhambra, by either moonlight or gaslight, as I have seen them. The scene is so restful and entrancing that if one but disposes the mind to enjoy it to the full, it is enough for an evening's feast of vision, giving impression to the mind of transcendent, tranquilizing beauty that ought to remain with any well-ordered brain as a joy of everlasting peaceful remembrance.

The Exposition may be used even by the brain weary, so as to soothe and rest, renew and refresh the mind, through its diversions from the daily grind of business and the soul weariness of the monotonous treadmill life of modern business labor and professional exactions. But its sights must be enjoyed, let me again impress it with discretion and deliberation, over many weeks of time, not all at once, with ample rest and food and sleep between the walks and rides about its miles and miles of territory, as

they must be traversed to be seen if brain fag is not to follow. To the neurasthenic, a visit to to this greatest of World's Universal Expositions is a risky experience, unless taken under neurologic advice and with due experienced psychiatric precautions.

The young and the strong, in the sappling age of life, when nightly recuperation completely restores each day's waste of neurone strength, need no special precautions, for they will soon learn in lessons of experience and be forced to take the needed rest for proper repair of mind and body and not be the worse for their lesson, because their fatigue being only physical, will be physiologically recompensed by nature in her natural course of recuperation. But neurasthenia, as the neurologist understands, is abnormal nerve center exhaustion and inadequate neurone reconstruction, after the psychic exhaustion of undue sight-seeing. Recuperation is neither so rapid nor complete in cerabrasthenics after this condition appears, as it was when their cerebro-mental state was normal and Nature preserved for them each day the rightful physiological balance between waste and repair; when reintegration and disintegration were better balanced and daily overwork of brain was better compensated.

The Fair should be visited by the brain-weary, if at all, seeking diverting rest as a recreation, with deliberation and without haste, and not as a strenuous task like his daily accustomed business grind, to be finished in the least possible time and with the most strenuous unremitting endeavor. Some people have come to the Exposition intending to stay several weeks, and visited it so strenuously for three or four days in succession that they have become completely exhausted and gone home unexpectedly soon to rest and repair from the over-taxation.

These observations are intended to apply to that strenuous individual whose life motto has probably been "nothing impossible" and whose rule of action is "always at it" or something of that sort, who has never admitted a limit to the possibilities of human endeavor, especially his own, who has regarded his mind as something apart from his

brain and not subjected like the organs of the body to definite physiological limits of endurance, who believed his brain could be goaded to limitless effort and who never stopped till cerebraesthesia and its attendant phrenasthenia called him to a halt. Who has always thought it was the other fellow and not he that would break in the strain of the battle of life. He is coming to the city. He is among our patients. He is among yours brother neurologists. You can arrest him for a time, because his brain exhaustion compels a halt, but you cannot suppress him or hold him down. He has not got over the idea that the mind is superior to the brain that sustains it. He will see the Exposition though he may die in the attempt. Since we cannot keep him away from it, let us try and guide him aright and teach him to make a diversion, rather than a task of it, a rest rather than a ruin. Let us try and make of the Exposition a medicine by counseling him aright, let us not permit him in his impetuous strenuosity to make it a source of further exhaustion, for the mental meat of the vigorous and unbroken may become, if taken the same way, a poison to the neurasthenic. Rest and restful diversions from accustomed brain strain are the remedies for the neurasthenic, and while Paine's fireworks and Hale's fire fighters are better for the hypochondriac and melancholic and should only be seen at a distance, if at all, by the neurasthenic. There are restful diverting scenes for him here that need not be denied him.

Not even the slightly neurasthenic, however, should undertake to go entirely and critically over any building of the great Exposition in one day, the Agricultural building for instance, even when transported through it, for it is 1,600 feet long and 500 feet wide, with eight corridors running lengthwise, lined on each side with wonderfully attractive exhibits of agricultural life and portrayals of pastoral art, to steadily enchain the mind's powers of observation and thought.

A pedestrian tour through this immense space, over its lengthwise and crosswise passages, would be a walk of nearly four miles and should only be undertaken by the

very strong in one day. The Palace of Manufactures is nearly as large, being twenty-five feet wider and but 300 feet shorter. The Varied Industries building and Transportation building are about the same size and the Palaces of Industry, of Mines and Metallurgy, of Education and Electricity and the United States Government building, are more than half their dimensions.

A cursory trip through any of these buildings, and then not without a roller chair, would be tax enough for any neurasthenic for any one day and quite enough, if well done on foot, for the well and vigorous. After such a trip, a restful ride on the lagoon launches or gondolas, luncheon, a short trip to a conveniently environing suburban hotel and a rest for the remainder of the day should follow.

These injunctions are only for those persistent, irrepressible neurasthenics who insist on keeping their psychic neurone machinery running, pending the efforts of the neurologist at effecting repair. There is another class among the brain-fagged professional or business man not yet in the hands of the neurologist, who might profit by some of the precautions against overstrain set forth in this paper. It embraces those who yet toil in that busy mill,

Where souls are ground and money is made
All day—"till temples throb and thrill
With the whirring grind of the wheels of trade."

And the ruthless, relentless, routine rest-robbery of this radium light and electric speed epoch of modern progress toward brain and body dwarfing and mind destruction.

The profoundly neurasthenic had better avoid the inside of the great exhibit buildings, except to give them but a bird's eye view from their entrances, to get a general idea of their grandeur and magnitude for comparison with the exhibit spaces of the next World's Fair, after he gets well, if the world is ever to have a replica of this great Exposition's exhibit palaces. The neurasthenic should hang about this great Exposition for months, seeing and doing but a little daily, as at a seaside home.

The World's Fair avenues, like the great boulevards of Paris, or the Nevsky Prospect of St. Petersburg or like

other expansive environments of the Exposition, are too broad to excite a feeling of Claustrophobia in a neurasthenic. Nothing of the kind for free air space within its enclosure has been seen in any previous similar Expositions, and the south and east view of the virgin woods of Forest Park, as they may be seen from the windows of the Intramural railroad, is not equaled by any scenery for native woodland grandeur in Fountainebleau or Rotten Row.

The sanitation shade and breezes of the woodlands may be enjoyed here and everywhere south of Monticello, the Fine Arts building, Mining Camps and Boer War enclosure and on the East Side. About the Mining Gulch itself, as it may be seen from the veranda of the Maine building, shows much breezy, restful woodland.

The neurasthenic tuberculotic would find the air and temperature here congenial to his pulmonary needs, even in the hottest weather, and the entire grounds are sanitary. The prevailing breezes here are from the south and west and temperature habitually averages eight or ten degrees lower on the Terrace of States than on the Plazas below. The high, cool plateau location of nearly all of the State buildings and the opportunities in all of them for sitting in the shade, coupled with the general hospitality of their invariably amiable and often handsome hostesses and courteous commissioners, makes them inviting places for weary visitors, even who are not neurasthenic. All, in fact, of the National buildings, at morning and evening, where even on the hottest days, of which there have been few this season, are pleasant, refreshing places of rest for eye and body and mind. The temperature this summer, up to the present date, has been extremely tolerable and almost every day agreeable.

The neurasthenic, who has the characteristic dread of solitude, will not feel alone at the Exposition and he who has a dread of crowds need not mingle with great crowds on the many special days, nor visit the Pike or the Plazas when the bands play, nor go at those hours and places when and where the people most do congregate, but can enjoy them at a distance. The best entrances for such

as wish to husband their nerve strength and avoid the confusion of crowds and save their physical strength are the gates on the south side, reached by the rapid transit and by the Administration building entrance of the Suburban system's most western gateway.

The grounds of the southeast side of the Exposition are the highest and the visitor sees everything here on a high level or as he descends. The exhibits here are the quietest on the grounds, being chiefly in the State buildings, the Festival hall, where the great organ is, the German building and great restaurants and the Terrace of States. In this vicinity are General Grant's Log Cabin and the Lewis and Clark historic Oregon* fort, Clatsop, built for winter quarters at the conclusion of the famous expedition of that name, across the continent to the Pacific in 1805-'06. The Lumbermen's club house (the House of Hoo Hoo) is here with its characteristic hospitality and its woods of more varieties than Joseph's famous coat had of colors. You may rest on the portico or in its restaurant, or have an excellent luncheon across the way at the grounds of the Grant Cabin, in the shade of the trees, or a little further south at the Southern Home restaurant, which looks out on the forest, or the German building restaurant or at Mrs. Rorers'.

On the northwest grounds are the Queen's Jubilee presents, Anthropology exhibits and the Hall of Congresses in the Administration and Washington University buildings. On the south and southwest sides are Jerusalem and Morocco and some of the State buildings and the Boer War camp, a desirable place to visit, full of interesting exhibits and where Generals Cronje and Viljoen may be seen independently of the exciting portrayal of the Boer War. A good place for the silent melancholiac, but not for the sanguiphobic and astrophobic neurasthenic.

*A legend on this building reads: Fort Clatsop 99 years ago. This structure is a replica of Fort Clatsop, the winter quarters of Merriwether Lewis and Wm. Clark and their company in 1805, after they had on the greatest of American expeditions crossed the continent to the Pacific. To this achievement, more than to any other, our Nation owes its frontage on the Pacific and its geographical basis as a world power. The centennary of the event will be celebrated through the Lewis & Clark Exposition, to be held at Portland, Oregon, in 1905.

Here also the American Med. Ass'n will meet next year.

If this cursorily constructed paper shall help any brother neurologist in managing that neurotic problem, the neurasthenic at the World's Fair, the author will feel himself rewarded for his pains. Of course the profoundly neurasthenic will not be at the Fair, but the milder neurasthenic, with graver symptoms than he may himself appreciate, will be there and if we can, we should turn his sight-seeing and novelty-seeking experience into an instrumentality of help, instead of harm, and this is not assailing the absolute rest cure for a class of these patients for whom absolute and secluding rest can be prescribed and will be taken.

Contrasted with other great expositions, a valuable comparative estimate of the Columbian and Louisiana Purchase Expositions is given by Mr. Edward Bangs, first assistant superintendent of Illinois, after a visit to the St. Louis World's Fair. This Exposition, he says, greatly exceeds the Chicago fair in scope, arrangement, extent and beauty:

"In the matter of exhibits there is to be found on these grounds a more complete, comprehensive and extensive display of nearly every branch of human endeavor than has ever been brought together. The arrangement of the buildings is convenient, and, for their extent, are easy of access from any point. The Cascades and the Grand Basin surpass the pictures heretofore to be seen at other expositions. The illumination of the Terrace of States, with the imposing Festival Hall, the Cascades and the water effect is an achievement of spectacular architectural effect that has never been approached."

We might except to this statement of Mr. Bangs, the electrical tower display of the Pan-American Exposition, but that was a limited feature of the Buffalo display and not at all comparable in magnitude and beauty to the general variegated illumination of the Cascades, Terrace of States and Exhibit buildings, the Pike illumination and other enviroing light displays.

This Exposition is, as President Francis in his *Everybody's Magazine* article stated last April, "the most remarkable ever held because it will cover more ground than any previous exposition, because the appropria-

tions from home and foreign governments are the largest ever made for a similar single fair, because, not only are there more exhibits than ever before were shown in any previous exposition of the kind, but because the Exposition shows processes and not products alone, that is, more of how goods are made, machines and fabrics constructed, than the manufactured products or the machines themselves, because there are many special exhibits like the airship contest, the Olympian games, the Model City and, we may add, the Live Stock show and the Wild Animal exhibit, as well as the Civilized Man exhibit of the Philippine possessions, and because, as President Francis says, the attractions along the Pike outclass those of any former Midway, and because the hill effects within the grounds will make the Exposition the most beautiful yet planned. To this we might add the envioning, magnificent and refreshing forest effect of the most beautiful natural forest park, excepting the Yellowstone and the Yosemite Government reservation, and the Ha Ha Tonka park, of Southwest Missouri. In regard to the exhibits of the Pike, we may remark that they are all elevatingly instructive, thoroughly moral and without any fake features whatever.

The magnitude of this Exposition may be gleaned from an examination of the many interesting features of the Philippine display, which some people regard as an annex, like the great Live Stock exhibit and the Stadium show. The Philippine grounds embrace forty-seven acres and have upon them thirteen hundred natives, six native villages, 445 Filipino scouts, a Constabulary numbering 280, a reproduction of a Spanish fortification and Spanish Philippine bridge, a Walled city, a War museum, a Government observatory and Relief map of the Islands, a Filipino Educational building, a reproduction of a Cathedral of Manila and the Manila Commerce building, showing Manila exports and imports, wonderful and beautiful woods, crude and polished, of the Islands, a typical Manila house, handsome and attractive without and within, containing exhibits of Manila woman's handiwork, the Government building, the Fine Arts exhibit, the Agricultural and Horti-

cultural exhibits of the Philippine Islands, the Ethnology building and house of the Tree Dwellers or tree-dwelling Moros, the Philippine Forestry building, with the principal exhibits of Philippine woods, a Model school in operation, with Philippine teacher and students, Mines and Metallurgy, Fish and Game exhibits of the Philippines, fishnets, Fish and Commerce boats, animals, birds of plumage and reptiles of the Islands, including the python and the tamaraau or water buffalo, a Band and Concert of eighty natives, Constabularies, a Philippine marriage ceremony, native dances, Moro music, Food and Cooking processes, etc., etc. The black water buffaloes may be seen enjoying life in the water of what has been produced as a replica of Pasig river.

A railroad will take you free of charge around the outskirts of these grounds, but they must be leisurely gone through, and the buildings and inhabitants closely inspected, to fully appreciate this part of the most wonderful of the World's Expositions. The round cannot be made by the strongest person, intent on becoming properly informed, in less than one day and, a person in anyway debilitated, should not attempt the arduous task without giving it the leisure inspection of many days. Places for rest and adequate refreshment are on these grounds, as they are everywhere about this wonderful Exposition. It is important that the nervously debilitated person, who imprudently ventures to visit these grounds, should find and avail himself of every favorable opportunity for rest and food repair of brain and body tax during his efforts at sight-seeing.

There is a class of neurasthenics who should be placed in a sort of half-way restraint sanitarium, with features between those of an insane hospital and a home for inebriates, who should sign away their rights to habeas corpus for a time, like Dr. Crothers' Connecticut patients often do, and be treated like Weir Mitchell applies his rest cure, *i. e.*, by absolute rest from all social life and business demands; but the majority are not of that class and will not and need not submit to so great an absolver of personal liberty. Most neurasthenics may be cured by a regulated prepon-

derance of sleep, light mental diversion, in lieu of the accustomed brain-fagging professional business or grief or sorrow-strain of mind, a superabundance of partly pre-digested nutrition, plenty of fresh, untainted air, as good a supply of daily sunshine as it may be practicable to procure, and a pleasing, diverting environment, such as may contribute to inspire the mind with the impression that life is still worth living, and dissipate the neuropathic timidity and morbid fears of the brain-fagged victims. A little daily diverting mental activity is better than autocratically enjoined repression of thought and emotion, which cannot be accomplished. A little exercise of those neurone aggregations (which we call centers), which have not felt the brain fag of the daily grind, if followed by ample sleep and nutritional reconstruction will prove salutary if we skillfully regulate, by judicious chemico-therapy the involved psychic neurones, and this, the present day neurology is now certainly resourceful enough to do with the aid of properly adapted environing influences, even in psychasthenia, about the cure of which so many are yet incredible.

A stroll or ride from the Inside Inn on Commonwealth Avenue, past the Utah, Indian Territory, Arizona, Mississippi, New Jersey, Iowa, Minnesota, Kansas, Massachusetts, New York, Ohio, Missouri and Wisconsin buildings of a balmy August, September or October early morning or evening, turning west down the valley roadway, between the New York and Kansas buildings, skirted with trees and flowers, with the gigantic bird cage, showing the birds of the Smithsonian National Zoological park, with the Oklahoma, Colorado, West Virginia, Montana, Vermont and New Hampshire buildings on the north, with the Michigan and South Dakota close by them, will instruct and interest in a restful way anyone whose brain neurones are not too much exhausted for even slight mental movement.

Birds of many climes and forms are there, large and small, squat and tall, and shapely and shapeless, graceful, graceless and gross. And their habits, all or nearly all, of seeking rest and sleep at the close of each day, will set an object lesson example from the feathered tribe worth

emulating by many World's Fair visitors. About this exhibit are seats for the weary and at the west are music and meals. From a seat here one may contemplate the ingeniously constructed, conical-shaped Washington State building, the United States Fisheries Commission building, the Portland Cement Exhibit building, the Potteries of Ohio, the Colorado burros and, near by, is the Mining Gulch, Third-rail railroad, the Metal pavilion of the Colorado School of Mines, the Kentucky building and the Government building and the Mines and Metallurgy palace. The South Dakota Corn palace in this vicinity is a specially pleasing, ingenious and artistic feature, where one may rest any morning in rapt contemplation of its beauty and skillfully artistic construction. The Kentucky, Texas, Hoo Hoo and German buildings are all in walking distance, in which one may rest and enjoy himself.

My dear brain-tired brother doctor, if

“It seems to you, you'd like to go
Where bells don't ring nor whistles blow,
And clocks don't strike, and gongs don't sound,
Where you'd have stillness all around.

Not real stillness, but just the trees'
Low whisperings, or the hum of bees, .
Or the brook's faint babbling over stones
In strangely, softly tangled tones.

Or maybe a cricket or katydid,
Or the songs of the birds in the hedges hid,
The bullfrog's sturdy note,
Or other 'such sweet sounds as these
To fill a tired heart with ease.' ”

You may even find these restful features, strange as it may seem, in connection with some parts of the great Exposition if you would avoid there the Machinery buildings, the Pike and the other noisy places, and seek the many tranquil spots skirted and reached by the Intramural railroad, the autos and Roller chair or on foot. They are the woody glens, like those leading to the great bird cage, the Philippine villages, the bridge over Arrow Head lake and the old Spanish fort that stands by it, in the early morn or shady eve, the Sunken and Machinery gardens, the great Plazas, where only the bands disturb, and the smoothly

gliding gondolas and launches of the Lagoons, or the seats of the colonade of States overlooking the rippling Cascades and the quietly passing boats below, or on the bridges (remote from the crowds) across the Lagoons, or the many restful places about the various eminences where restful, home-like State buildings are, like those of Bouvoir, Monticello, Fort Clatsop, Maine, New Jersey, Maryland, along Colonial Avenue, near the Inside Inn, where Indiana, Rhode Island, Nevada, Connecticut, Pennsylvania and Arkansas are, on the same street opposite, and other buildings having no bands playing. In addition to this you seek one of the many quiet sleeping places at night on the high ground environing the Exposition, in hotel, in tent city or in private house.

On some part of the porticos of most of the State buildings, and most of the other buildings, one may find shady and restful chairs and enjoy a tranquil and inspiring view and verdure of trees and in "these thick and rich-hazed sumptuous autumn nights" common to Missouri now, when "the moon grows like a white flower in the sky" and "stars are dim," and "tired Nature rests content among her sheaves, as a fond mother rests among her children," the tired brain may recoup itself upon a tranquil feast of smiling delights, of soothing scenes, in a thousand places about the Exposition and away from the music-stimulated Plazas, where the masses most are seen.

After having visited nearly every World's Exposition since 1876, and having been over one hundred times in this, though without yet having seen it all, I make this record of my experience, that it transcends them all in grandeur and beauty of architectural and æsthetic feature, as well as commercial and politico-economic comprehensiveness.

At the Louisiana Purchase Exposition, the strong and vigorous who runs through it may read the lesson of the great modern world's great progress, and the brain-weary may, if prudent, view it with leisurely pleasure, if he take but time enough, for unlike its predecessors, beauty and amplitude of landscape as well as architectural design show everywhere, and within its ample grounds may be

found a hundred restful views refreshing to look upon for body and brain.

Notwithstanding the immensity of this great Exposition, where the healthy, hearty seeker after world's sights may satiate his mind with a full mental meal in two or three weeks, the specially brain-fagged, with mind strained in one line of business or professional thought, may make of it a recreative, diverting, restful, sight-seeing tour of the world within from forty to sixty days. Here he may go and visit within thirty-six hours, without mental or bodily fatigue, Ireland and Jerusalem, and on another two days and a night he may see Austria, Germany, Holland, Sweden, the Tyrolean Alps, Charlottenberg Castle, *Das Deutsche Haus*, sleeping each intervening night on terra firma. He may go to the Philippines on another day and be but an hour or two in transit, if he stops at a near-by hotel by means of the Street and Intramural railways or the Automobile transit. He may, in the same manner, go to Mysterious Asia, to Morocco, New York and the North Pole, Over and Under the Sea, to and from Paris, to the Battlefields of the Civil War and Mexico, to Santiago, to Cuba, to the Galveston Flood, to China at the Pavilion, to the British Pavilion and the Cottage of Burns, near the banks of the Doon, to the Brazilian, Japanese, Belgian and other foreign buildings, to Alaska and its totem poles, to Oregon and to Washington, States of tall timber fame, to the Mining regions of Missouri, Colorado and the Great West and down into the mines, whence comes in life-like representation the mineral wealth of these United States. In like manner may the natural resources and manufacturing products of all countries and all sections of this great country be seen. So we may see the aborigines of America, the Indian school and huts, the African dwarfs, the buildings of all the States, and the extensive water, forest, and plateau views of this blended and unequaled picture of landscape and architectural beauty and commercial and educational utility, such as the world has never before seen in one assemblage, and whose like perhaps we shall never see again.

HEREDITY: ITS INFLUENCE FOR GOOD OR EVIL.*

By MARTIN W. BARR, M. D.

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FROM the most ancient times it has been accepted without question that heredity is law—a law verified by accumulated evidence gathered in every department of science that treats of organic life. A review of the observations, experiments and conclusions, thus reached, is necessarily an interesting study to earnest thinkers in many fields, as is proven by your including the study in to-day's program; and this invitation to accompany you through some by-paths of research is, I assure you, most highly appreciated. It is by this interdependence and interchange of views and results attained that a knowledge of the inexorableness of this law has been attained and demonstrated, and only by a continuance of such interchange, may we still further elucidate the justice of its penalties and the mercifulness of its awards. The aim and crown of such labors is the perfecting of life all along the line; the flowers of the garden, the far-stretching fields of waving grain, the over-shadowing orchards, domestic animals—both bird and beast—the flocks and herds, shall each feel the touch of energizing power in the elimination of ill and infusion of good; and the family to which all these contribute, shall realize the prophetic vision that its sons may grow up as the young plants, and its daughters appear as the polished corners of the temple.

It is time to awaken to this call for the strenuous feverishness of the day has ushered in such a reckless dis-

*Read at the Annual Meeting of the G. B. Association, Philadelphia, Jan. 25, 1904.

regard of life, that man fails to recognize accountability either for his own life or his neighbor's. It would be well to go back to the contemplative age and to realize that in both the giving and the taking of it, the most sacred thing about life, is life itself. To such an end do our labors point, and in this are the florist and the farmer agents in large measure. The cross fertilization of flowers, the intermixture of grains, the grafting of orchards, the cross-breeding of animals, are fruitful sources of information as to the fit propagation of species, and guides therefore in that study of mankind—the proper study of all men.

The law of physiological heredity is based upon the tendency observable in each and every organism to repeat itself in its descendants. This would, in the higher organisms, include largely the transmission of those psychic qualities which, in large measure, depend upon physiologic conditions.

Darwin's celebrated hypothesis of pangenesis, "which implies that each of the atoms or units constituting an organism reproduces itself" is perhaps the strongest basis, for this reasoning. Here we are led to "consider each living being as a microcosm, made up of a multitude of organisms" each possessing the fundamental properties of life—nutrition, evolution and reproduction. "Alongside of this mode of multiplication, I suppose that the cells, prior to their conversion into formed and perfectly passive material, emit minute grains or atoms which freely circulate through the entire system, and when they find sufficient nutrition afterwards develop into cells like those from which they came. These atoms we will call gemmules. We assume that they are transmitted by parents to their descendants, and that usually they develop in the generation immediately following, though for several generations they may be transmitted in the dormant state and develop at a later period. It is supposed that gemmules are emitted by each cell or unit, not only during its adult state, but during all its states of development. Finally, we assume that the gemmules have a mutual attraction for one another, and hence their aggregation into germs and sexual elements. Thus strictly speaking, it is not either the reproductive elements or the germs that

produce new organisms, but rather the cells themselves, or units constituting the whole body.”*

According to Ribot: “This hypothesis enables Darwin to explain a great number of phenomena, very different in appearance, which, however, physiology regards as essentially identical. Among these we may name gemmiparity, or reproduction from buds, fissiparity, where reproduction is effected by spontaneous or artificial division, sexual generation, parthenogenesis, alternate generation, the development of the embryo, repair of the tissues, growth of new members in place of those which are lost (as occurs in the case of the lobster, the salamander and the snail)—in short, all modes of reproduction whatsoever, and all the modes and all the varieties of heredity.”

“The cause of heredity,” says Hæckel, “is the partial identity of the materials which constitute the organism of the parent and child, and the division of this substance at the time of reproduction. Heredity, in fact, is to be considered only as a kind of growth, like the spontaneous division of a unicellular plant of the simplest organization.”

Indeed I suppose one of the clearest expositions of this power of reproduction is found in the process commonly known among florists as “layering,” or the propagating of many plants from one by laying a leaf in the ground under suitable conditions; here the original cell on leaving the mother plant, not only receives but multiplies and distributes this power without diminution of energy. Yet this apparently simple mechanism in the lower forms finds such resistance in the extreme complexity of the higher organisms, as to produce and constitute many variations in heredity. Only a few of these may be considered in the limits of a brief paper, but I will strive as far as possible to touch the several broad divisions, under which these may be more closely studied—heredity *direct*, *reversional* and *collateral*.

In the first named, DIRECT HEREDITY, the offspring may receive physical and psychic characteristics from both parents in equal degree, or it may resemble one more than the other; again there may be an agreement or a difference

(Note.)—Darwin: Variation, etc., vol. ii. chap. xvii.

according to sex—the son receiving the paternal, the daughter, the maternal characteristics; or the cross transmission where the son resembles the mother and the daughter the father. Cross heredity is sustained by many great physiologists who give numerous examples. “Every son takes after his mother” says Michelet—“Catherine and Marie de Medicis, gave us true Italians, and Louis the sixteenth, was a real Saxon King, more German than the Germans themselves.” Buffon claimed to derive all his gifts from his mother and Mirabeau says of his son, “He possesses all the low qualities of the maternal stock.” Nero, the Gracchi, Henry fourth, and James first, are notable examples of maternal transmission; Hypatia, Julia (Pompey’s wife,) Lucretia Borgia, Anne de Beaujeu, and Madame de Staël of paternal.

Cross breeding in the lower animals gives similar testimony. The Arabs seek always the genealogy of the female for their horses. With the French it has passed into a proverb “*Chien de chienne et chienne de chien.*”

The transfer of moral qualities is thus noted by Buffon: A she-wolf crossed by a dog, dropped two cubs of which the male was wild and savage, the female gentle, familiar and even affectionate. In direct sex-heredity we have also numerous examples; Hannibal, Tasso, Charlemagne, Rafael, Bellini, Pitt, and D’Israeli, are however, instances of excessive talent, force or genius, and therefore a greatly preponderating influence. With many of these there were also the added influences of environment, and the association of strong personality.

A singular case coming to my knowledge is that of a man of wealth and education, whose grandfather was a moral imbecile, and he himself notorious for his extreme cruelty to animals. On one occasion, in a violent fit of temper, he deliberately stabbed and killed a favorite horse of great value. Similar traits were noted in his son who, rich, handsome, cultured, of esthetic tastes, a graduate of one of the most prominent colleges in America, made a pronounced hit in his chosen profession. Enjoying for some years phenomenal success, wine and women proved his bane, and he sank lower and lower. His excesses no longer tol-

erated at home, he drifted from capital to capital in Europe, and finally established himself in Japan with a harem. With an appetite still unsatisfied, he exhibited new phases of moral degeneration, causing his body to be tattooed with wonderful skill, every picture a work of art. Thus his back bore a huge dragon, the shading of each scale showing perfection of detail; this, on revisiting America, with the utmost vanity he shamelessly exposed. Returning to Japan, he bought a performing bear and wandered from place to place clad in the garb of a *hinin*, exhibiting himself, his bear and his harem, and distributing photographs of each and all in endless variety. This past-master in vice, shocking both Europe and America, and astounding even Japan, next hired a squad of Japanese boys, who, attired in full uniform, are trained in military exercises. To these are opposed an equal number of monkeys dressed as Chinese soldiers, and the war of China and Japan is constantly renewed for the entertainment of himself and his harem, who watch in ecstasy of delight the sufferings of the poor brutes. Rewards are offered, and the more bloody the contest and the greater the atrocities, the more intense is his gratification.

Yet another case is that of a man also of high social position, who was closely related to one of the famous presidential families; his wife one of three sisters all noted beauties. With every advantage of education and culture, a gifted artist, excelling in miniature painting, in which he gained a reputation for exquisite delicacy of coloring and attention to detail, he was nevertheless a moral imbecile, brutal in his treatment of his children and of the wife with whom he lived for over forty years in a silence unbroken by the interchange of a single word. Of five children—three sons and two daughters—two sons inheriting all their father's brilliancy and artistic tastes, were moral imbeciles; one a thief, a liar, a profligate and a fugitive from justice; the other a minister of religion admired for his talents, but untruthful, dishonest and unreliable, losing the esteem of all good people as rapidly as he gained it. He had a son, also a pronounced moral imbecile.

Of the three normal children, a daughter inheriting her

mother's beauty had three sons all mentally defective. This latter case shows the second variety to which we have alluded, and which we will now discuss.

REVERSIONAL HEREDITY or ATAVISM, is the form which of all others attests the certainty of hereditary transmission. Here the offspring may resemble neither parent, yet may develop physical traits, idiosyncrasies, habits, talents or vices, traceable to a grandparent or to some far away ancestor. "Is it not marvelous" says Montaigne, "that this drop of seed from which we are produced should bear the impression, not only of the bodily form, but even of the thoughts and the inclinations of our fathers? Where does this drop of water keep this infinite number of forms, and how does it bear these likenesses through a progress so hap-hazard and so irregular that the great-grandson shall resemble the great-grandfather, the nephew the uncle?"

This form recognized by the ancients, is recorded by Aristotle, Galen and Pliny. Plutarch tells of a Greek woman who having given birth to a negro child, was brought to trial for adultery, when it was discovered that she was the fourth descent from an Ethiopian. An analogous case transpired in this very city: A young couple happily married were on the verge of separation, the wife having born a negro child, when the young man's father revealed to him the skeleton in the family closet. His great-grandfather was a negro.

In this reversion to original type, the prepotency of type frequently asserts itself, either in hastening degeneracy or in an effort of nature to redeem the race. Thus, in a family in which through five generations of neurotic inter-marriage, I have traced the taint from one insane progenitor appearing in the various forms of insanity, imbecility, epilepsy and consumption; where there was admixture with unconaminated stock the children were normal, although the taint reappeared in later generations.

In the advance from savagery, both with man and beast, this reversion to original type is liable to occur under any strain or change of environment. How often may the wolf be traced in the dog—the tiger in the cat? The negro brought from the wilds of Africa to America was rescued from can-

nibalism—transferred from barbarism to civilization. Slavery was for him a period of evolution in which impelled to advance he was also in that advance, guarded from a lapse into former conditions and shielded from the responsibilities and cares of existence which at that stage his very childishness forbade his assuming. Crimes against women were almost unknown in the whole Southland. As soon as the strong hand was lifted the tiger leaped, and we have now daily instances of reversion to original type.

INDIRECT or COLLATERAL HEREDITY—i. e., the appearance in a later generation of qualities or characteristics of uncles, aunts or cousins, is in reality only an evidence of atavism traceable to some neuroses in a common ancestor which, tenacious and prepotent, reveals itself in many descendants in lieu of one, showing a stability amounting to a dynamic force. This stability is also noted in what is known as “use heredity” where the repetition of habit or occupation leads to its becoming a part, as it were, of the family or the race, and therefore transmissible by generation. The same theory accounts for the gradual loss of certain powers or even of organs upon which the animal or the individual is no longer necessarily dependent. As is well-known in the case of prostitutes, nature safeguards the race *eventually* by means of sterility, disease or death. But for this what might not have been the further increase of numbers? In spite of it what disasters have not been accomplished?

This law of use and disuse—*kinetogenesis*—together with the law of inheritance of acquired character was clearly stated as far back as 1809 by the French philosopher Lamarck, thus: “The development of organs and their force or power of action are in direct relation to the employment of these organs.”

This is an open sesame to the study of the various heredities of the emotions, of the intellect, of the will, of talents, of skill, as also of disease, of parasitism and of crime. Two notable examples showing these in marked contrast resulting, the one in progression, the other in degeneration, is first: the Bach family whose history covering a period of two-hundred years, shows fifty eminent musicians.

The average birth-rank of progenitors during that period being thirty-six years, their descendants were therefore conceived during the highest period of development and therefore of procreative power. The second, a family known as the Tribe of Ishmael, is supposed to have its root in the old convict stock transported to America in the seventeenth century. Oscar McCulloch has followed its history through six generations, beginning with three individuals and increasing in less than a century, to five thousand, flooding the North-West with a continuous stream of pauperism, imbecility, insanity, and crime.

Here we find life in a turbid stream taking the line of least resistance—a gutter existence gathering filth at every crossing. Degenerating as the sexual impulses become exaggerated, puberty is reached and reproduction effected in the very age of childhood, before the physical being is otherwise developed. This is the race suicide most to be dreaded; it is the *quality* more than the *quantity* of numbers that needs to be maintained. Not only do degenerates multiply more rapidly owing to this precocity and exaggeration of sexual desire, but the many phases of moral imbecility present often an intellectual precocity and cunning that would deceive even the very elect, so that the normal are constantly seduced and impregnated by the abnormal and thus is being produced a constantly increasing body of defect. Of all heredities there is none that so clings with the permeating, penetrating, disintegrating power, as an heredity of imbecility; and you may perhaps realize that in this I am able to speak with some authority when in an absolutely unbiassed study of the family histories of 3,050 mental defectives, I have found various heredities a potent cause in 65 per cent. of cases, and one-half of these due to direct heredity of insanity and imbecility. Truly, according to this, there is more care exercised in the breeding of animals than in the procreation of children! I never realized this fact so entirely until, a few years ago, when engaged in the trial here in Philadelphia of Samuel Henderson, an imbecile, aged 15, the son and grandson of imbeciles, for the murder of Percy Lockyer aged 5.

The boy Henderson, like so many of his class, is a series of contradictions: He is tender and cruel, ingenious and crafty, phlegmatic and nervous, unfeeling yet affectionate; he is open, frank, artless, secretive, shy, deceitful, truthful in many ways, but also an accomplished liar. Atavism and environment combine to form a moral imbecile, in whom the moral sense is obstructed or altogether absent. One of his chief characteristics was fondness for animals, babies and young children, and it was remarked on the afternoon of the tragedy how carefully he carried the little Percy on his shoulder across the muddy fields to the playground in the wood from which later he returned alone. When search was made for the missing child he denied, when first interrogated, any knowledge of him or his whereabouts, but afterward, revealing the imbecile peculiarity in his susceptibility to suggestion, he was finally led to a confession of the deed and to a narration of the circumstances leading to it. How that playing "Wild West Show"—his parents had travelled with Buffalo Bill—the child ran against his knife and, as he expressed it, "just stretched, and said nothink." Then in sudden terror he stabbed him again and again, dragged the body into the stream, concealed it under rocks and ran home, where he took up his evening duties with the same indifference which he displayed later in the court room when a prisoner at the bar.

It is this childishness, instability, irresponsibility—which reveals more than all else the force of the law of disuse in heredity. Children, we call the victims of such and children they are, be they six or sixty. It is the assurance of this gained in a life experience of companionship with these children, that has led me to see how that the great mystery of life and responsibility of race continuity is too often committed to children; and to arrive at the conviction that no man or woman with a pronounced heredity of ill—physical or psychical—has a right to risk its transmission.

Studies in heredity tend to emphasize the wisdom of those ancient peoples who taught that the healthful development of the individual and the elimination of the weakling was the truest patriotism—springing from an abiding sense

of the fulfillment of a duty to the state. The surest rescue of a race from imbecile childishness, is a prolongation of normal childhood full of healthful exercise and free from mental precocity, which delays the period of puberty; then if marriage be deferred until maturity in full vigor be attained, the period of reproduction will be proportionally advanced, and the quality of the race will be preserved without diminution of numbers.

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

“SHORT CUTS TO CEMETERIES.”—The following sanitary salvage views are sound. If the daily press were always as sound on the deleterious influence of quack advertisements as on overstrain of brain at political conventions, it would be better approved by the medical profession.

This editorial is from the St. Louis Star:

“Short Cuts to Cemeteries.—The death of Reporter ‘Jim’ Galvin at the Republican State Convention at St. Joseph brings up the devastating influence of conventions on the health of those who have had to make them a study.

“Although Mr. Galvin’s death could not be charged to the St. Joe Convention, because it was comparatively mild in its demands on strength and vitality, the same has not been true of other nominating bodies recently.

“News comes this morning that Gov. Pattison of Penn-

sylvania is dying, largely because of the strain incurred in nominating Parker in St. Louis.

"The National Democratic Convention was a test of endurance through which no man should be required to go.

"Sanitariums and rest shops of the country are full of politicians and newspaper men who have not recovered from it yet. Dave Hill and many members of the New York delegation and other State delegations are still under the weather.

"Beginning with the session of the Committee on Credentials, which lasted over thirty hours, the St. Louis convention followed with two all-night sessions, full of the most riotous debate and the most nerve-wrecking contentions.

"The Democratic State Convention which nominated Folk at Jefferson City was nearly as bad.

"All night sessions of the Committee on Credentials and the Committee on Resolutions preceded all night sessions of the convention.

"Folk was nominated at sunrise one morning, and after an adjournment for four hours the convention continued its work all day.

"The same reckless disregard of the rules of health and living are conspicuous at such gatherings all over the country.

"It is not possible that the safest and sanest deliberations should be attained under such unsanitary surroundings and circumstances, and for this reason, if no other, these convention methods should be abolished.

"There is grave necessity that an eight-hour law be passed for all such bodies, with a penalty clause severe enough to prevent any violation of its provisions."

How can men expect deliberate and sound logic to show in platforms evolved from fagged and fuddled brains after a night of vigilance. It is not strange that a deliberate rested brain had to revise the platform of the St. Louis National Democratic Convention.

THE PHYSICIAN IN FRENCH POLITICS.—"Twenty-three physicians were chosen as candidates for the mayoralty in as many French cities at the recent elections, and

of these only two were defeated." This is a pointer for America. Medical men should seek to gain and hold legitimate political influence for the good of the profession and the welfare of the people.

When medical men claim and secure their due share of political influence quacks and quackery will go from the foreground to the background and their political promoters will have more regard than now for true professional interests and the real sanitary welfare of the populace.

CROWDED INSANE ASYLUM.—The Board of Health has discovered again that the insane asylum is over-crowded. This discovery is made about once every six months.

There are 720 patients in the asylum, 199 of them being compelled to sleep in the hallways and general assembly rooms. The building is crowded with 500 patients. Not more than 400 can be safely and comfortably cared for.

This condition is the scandal of more than a decade. The asylum has been crowded for years, many of the patients being cared for in the Poor House.

In the new St. Louis now beginning to grow, a leading feature of municipal policy should be an intelligent up-to-date system of public institutions. St. Louis is poorly equipped with the instruments of humanity and humane purpose. To lift the city to the highest level in this respect should be the aim of every public spirited citizen and a fixed item in the program of the municipal government. —*Post-Dispatch*.

We are glad to see the public press taking an interest in our eleemosinary institutions and especially in those peculiarly unfortunate who fall mentally maimed in the strenuous battle of life or who fall as brain bruised victims of ignorance and vicious heredity.

While the Mayor is asking for the purchase and retention of the lagoons in Forest Park for the pleasure of the people and the beautifying of the most beautiful and extensive Forest Park in the world after the Worlds' Fair, let him not forget these unfortunate wards of a philanthropic people who can not speak out their needs.

Philanthropy is the true measure of civilization and well endorsed and equipped eleemosynary institutions are the true indices of philanthropic measurement.

The divine injunction "with what measure ye meet it shall be measured unto you again," has a scientific as well as divine injunction aspect.

The mentally maimed rightly and timely cared for may be restored to the usefulness of rational life, to bless again the state and the family, oftentimes in self-support and remunerating labor for the good of all.

The insane asylum proper was constructed to accommodate 250 patients. The poor house addition had also to be later utilized, but it is not suitably constructed and is not safe from fire, when crowded with insane.

THE PRACTICE OF MEDICINE—A PENNSYLVANIA DECISION ON WHAT IT IS.—A Chambersburg Pennsylvania Judge lately assessed a fine of two hundred dollars on an itinerant so-called 'doctor' Thomas E. Eldridge. Following is the dictum of the judicial decision, "the practice of medicine consists in the offering of services *as a physician*, and treating diseases, deformities and injuries by *any means whatsoever*."

The assumption of the vocation of doctor of medicine without the legal qualification caused the sentence.

ADDRESSING A DOCTOR AS "DOC" has been very properly interdicted by the Health Commissioner of St. Louis. It is not even the proper thing for horses.

TOXINS OF INSANITY.—There are others like those of phthisis, syphilis and typhoid, but James Wright Putnam is quoted in the *Buffalo Medical Journal* as naming Bright's disease and diabetes mellitus prominent among the diseases, the toxins of which may produce insanity.

Auto-intoxication from a disordered alimentary canal which produces disturbances varying between headache and irritability, and confusional insanity, are familiar to all of us.

Berkley is quoted in several instances showing the oc-

currence of confusional mania from constipation, from diabetes, from hypersecretion of the thyroid; also Gowers in the mental disturbances incident to exophthalmic goiter.

Williams, Hobbs, Macdonald, Clouston, Charcot and others are mentioned as supporting the theory that many cases of insanity are produced by toxins.

The author concludes with the statement "that its close connection with many general diseases makes it of special interest to the general practitioner and specialist alike."

To these may be added epilepsy and its probable toxine, tetanus, etc.

ASYLUM PROMOTIONS.—The *Dominion Medical Monthly* says truly in accord with all real psychiatric experience: We are in perfect accord with sentiments of a member of the Opposition when he states that the Government ought to make promotion in the asylum service a reward for faithful services. Nor do we see the need of passing by a faithful and competent assistant when a superintendent is required, as is too often done. The medical service in our various asylums should not be a means of awarding doctors who have done a little stumping and a little caucussing for party; and it is to the credit of no government to use the offices as bait for party angling. Our insane asylums should be hospitals, medical appointments to which should be made irrespective of party, and preferment given to those with experience, who have devoted their lives as internes since graduation. The doctor with political ambitions given the quietus, whether in general practice or a specialty, should not be foisted upon the wards of the government.

THE EYE-STRAIN THEORY OF THE INEBRIETY CURE, as seen by the laity, is well portrayed in the following from *The Mirror*: A new disease added to the long list of those asserted by the talented author of "Biographic Clinics" to be due to eye-strain is alcohol addiction. At a meeting of opticians at Milwaukee on Wednesday of

last week, a Chicago refractionist reported a case of chronic alcoholism cured by eyeglasses. The speaker took the obvious ground that the craving for alcoholic stimulation was a nervous affection, and he had found, he said, in a long series of ocular examinations, that inebriates often suffer from anomalies of refraction and other producers of eye-strain. Such being the case, the natural corollary follows that spectacles will cure inebriety. The reasoning is as profound and as sound as a good deal of that used by many of the extreme advocates of the eye-strain theory, and no doubt we shall soon have the inebriate looking through other glasses than those he must tip up to make transparent.

REMARRIAGES OF WIVES BY FEMALE SEXUAL INVERTS.—*The Alienist and Neurologist* of November, 1902, called attention to the marriage of two female sexual inverts in Canandaigua, New York, and the subsequent death of the "husband." The widow, "Mrs." Edith Dyer Howard, was married to George Richmond, a Pennsylvanian, at Shortsville, New York. Mrs. Howard has been a "widow" since March, 1902. Her first "husband" was known as William G. Howard, but, after death it was found the supposed man was a woman, whose real name was Alice. Alice Howard was legally married to Edith Dyer twelve years ago. The "husband" was then 20 years old and came of a family well known and respected in this section. Since childhood male attire had always been worn by the supposed William. At intervals three children appeared in their home, two of whom are claimed as their own and one said to have been adopted. There has been a change in the characteristics of the "widow" since what is regarded as the approach of the menopause. Formerly, she showed no special desire for male society, but since the death of her "husband" there have been gradual changes in this particular, which led to the re-marriage.

BEQUESTS OF A REVEREND PARETIC.—The Associated Press notes the death on September 13th of Rever-

end James, of Nattooma, Kansas, who created a great sensation and much trouble by his paretically magnificent endowment of Kansas colleges and other public institutions of that state.

He believed and declared himself to be one of the heirs to a fabulous estate in England to \$20,000,000, and made bequests accordingly. He was pastor of the M. E. church at Oakley, at a salary of \$500 per year. Among the bequests made was \$1,000,000 to the Kansas Wesleyan at Salina. This money, he stated, would be paid as soon as he could go to England and get it. Salina became excited, and real estate went booming. By the assistance of the school and a local banking house, both of which believed in the story, Rev. James secured the means to go to England. After sailing he was lost to his friends for several months. He suddenly appeared in McPherson, Kan. His mind was a blank as to what he had done in England, except that he saw his brother, who told him that their father had died, but had willed his fortune to his stepchildren. Rev. James believed in the story so implicitly that Judge Osborne was sent to England to investigate. Upon his return he reported that there was no foundation for the story.

Paresis makes much trouble in the world other than monetary, and it ought to be better understood on the stock exchange.

The high pressure brain-strain life of our "captains of industry" and "Napoleons of finance," is developing and has developed many disastrous paretic movements in the financial, as well as in religious and political fields of mental action. It is well to steer clear of the sphere of influence of the paretic and the paranoiac in church and state, on change or on the hustings. The morbidly deluded often mislead the sane but over-confiding into that "way which seemeth right unto a man," though the way leadeth to discomfiture or misfortune.

SUICIDE FROM INSANITY DUE TO ACCIDENT is held by the Mass. Supreme Court in Daniels vs. N. Y. N. H.

& H. Ry. Co. (62 L. R. A.) to be such a new and independent agency as does not come within and complete a line of causation from the accident to the death so as to render the one guilty of the negligence responsible for the insanity when the suicide is voluntary and wilful. It is obvious this decision would hold only in states where the knowledge of right and wrong is a test of insanity. K.

PENAL FOUNTAINS OF DISEASE AND VICE are our city jails. The innocent as well as the guilty are put in them and detained for trial or as witnesses.

No innocent man should be subjected to the indignity and degradation of a dirty jail, and a man is lawfully presumed innocent till proven guilty.

No man, innocent or guilty, should be exposed to tuberculosis, syphilis or the moral contagion of criminal association, unless the law ordains it as a merited punishment for crime.

The right of an accused or suspected man or one detained as an important witness to cleanly and safe custody demands separate restraint, free from exposure to either physical or moral pestilence, pending the determination of his guilt or innocence. The average modern jail, with its dirty, disease-infected cells, is a crime against humanity and a stain upon the humanitarian pretensions of our time. Many a man is unjustly murdered under the guise of the law by unjust exposure in disease-infected cells, or ruined in morals by unwilling, undeserved communication with the stinging vipers of evil communication.

The *Fort Wayne Journal-Magazine* has taken up this subject none too soon for the welfare and rights of both innocent and guilty among people who have the misfortune to get in jail. These breeders of disease and immorality, as well as the state penitentiaries and reformatories, need more enlightened oversight and management on lines of both physical and moral hygiene.

THE ABIOGENESIS CONTROVERSY.—Despite the seemingly crushing defeat inflicted on Bastian and the ad-

vocates of spontaneous generation by Pasteur and Tyndall, the result of which was the germ doctrine as now systematized after more than three centuries of existence, the doctrine of abiogenesis has been revived of late years. It is unfortunate that the most blatant advocates of this doctrine know so little of biology as to ignore need of control experiments and disregard entirely, evolution as seen in embryogeny. This is the case with an Indiana experimenter, who knows nothing of culture mediums and confounds microbes with comparatively high types of life, like insects. The first step has been taken in abiogenesis by chemists who have formed organic products from purely mineral substances which have never passed through life as have coal and coral limestone. The crude abiogenesis of the 70s was accompanied with an equally crude heteromorphosis. Concerning a recent contribution to this ancient, rather chaotic philosophy, the eminent American embryologist, C. S. Minot, remarks in a recent review of *Studies in Heteromorphosis*, by H. Charlton Bastian, that (*Boston Med. and Surg. Journ.*, July 14, 1904.):

"The author is unfortunate in making the ambitious attempt to overthrow the fundamental conceptions of biology, as to species, heredity, the genetic relations of forms, etc., by maintaining that by heteromorphosis one form of low life may give rise to another entirely different, as bacilli and eggs of rotifers to protozoans! He lacks the very most rudimentary conception of scientific proof, and the elementary ideas as to experimentation which we might expect of a schoolboy. It is only necessary to say that his typical experiment is to put stagnant water with vegetable matter in an open flower pot. Finding, at first, one species plentiful and days or weeks later another species plentiful, he has proved that the first has changed into the second. It is hardly necessary to add that the book is in no sense a scientific publication, and should be forgotten as speedily as possible."

That the criticism so far as style, method, judicial tone and logic are concerned, is fully justified, no candid reader of the work criticised will deny. It is written rather from the standpoint of the medical special pleader than from the viewpoint of the scientific investigator. This is

particularly unfortunate, since the principle which Bastian sought to maintain is supported in a much less crude sense by morphologic studies of microbes. The gap, however, between the protoza and the microbe is too wide to be bridged by a jump like that portrayed by Bastian. The microbes are a kingdom of their own, distinct from vegetable and animal, but shading into each. The bisexual vegetables are higher in many particulars than the microbes most allied to the animal type. The sudden jumps from microbe to animal can only appear possible to microbophobists who designate bacteria as bugs. This is, however, a sophomoric pedantic twist to Minot's criticisms when he hopes that Bastian's work will be forgotten. It is only by discussion that advance is made and the quickest way to destroy an authoritative tone in science, is to discuss it from a purely logical standpoint and admit facts when proven without seeking to overwhelm them with ridicule, even though ridiculing pedantic displays of ignorance. Pasteur and his followers through this very pedantry have caused more waste of medical intellect than has hitherto obtained in any department of science. Koch, in his reversals of his original position as to tuberculosis, aptly illustrates this. He and his followers ridiculed any student of comparative medicine who, ten years ago, pointed out differences between human and animal tuberculosis. These differences were regarded as differences produced by soil, rather than by different germs. Koch now claims that the difference is of kind, not degree. A similar reversal is probable when abiogenesis and heteromorphosis are presented by better trained advocates and in a less crude form, which recognizes actual teachings of biology.

THE APPOINTMENT OF PROF. WILLIAM OSLER of the Johns Hopkins Medical School, Baltimore, as Regius Professor of Medicine at Oxford University, in succession to Sir John Burdon Sanderson, has been approved by King Edward.

Prof. Osler, who has been Professor of Medicine and physician to the hospital of the Johns Hopkins Medical

School since 1889, is a Canadian by birth and is fifty-five years old. After being graduated from McGill University, at Montreal, he studied in Europe. From 1874 to 1884 he was a professor at McGill University, and then for five years was Professor of Clinical Medicine at the University of Pennsylvania.

Dr. Osler will continue to hold his position at Johns Hopkins University until 1905, thus completing the coming term at that institution.

DR. GEORGE F. BUTLER has severed his connection with the Alma Springs Sanitarium, at Alma, Michigan, where for nearly five years he has been Medical Superintendent, and has returned to Chicago where he will henceforth limit his practice strictly to Internal Medicine.

He will fill the chairs of Professor of Therapeutics in the College of Physicians & Surgeons, and Professor of Medicine in the Dearborn Medical College; he has also been appointed as one of the attending physicians in the Samaritan Hospital.

Dr. Butler will continue to edit and publish his magazine "How to Live," and it is understood that he has under way another medical work for a Philadelphia medical book publisher.

Dr. Butler is one of the tried and true in social and vocation life. Alma will miss him; the many patients over the land who have felt his kindly, skillful hand, will miss him. Chicago and the two Colleges to which Dr. Butler has gone will be doubly blessed.

DR. WILLIAM W. GRAVES informs his professional friends that he has returned to the city and that he will limit his practice to nervous and mental diseases.

DR. GEORGE F. SHRADY HAS RESIGNED the editorship of the *Medical Record* after nearly forty years of continuous service beginning with its foundation. The *Medical Record* owes the high position it holds to-day in American medical journalism to Dr. Shradly. The journal was founded by him thirty-eight years ago. His name has been on it

ever since. This record of continuous editorial management, says his successor Dr. Thos. L. Stedman, has been exceeded only by that of Wakeley's and the *Lancet*.

The beginning of the *Medical Record* was small and Dr. Shrady was its first typo as well as editor. Beginning as a semi-monthly in 1866 it has grown to a weekly of two thousand pages annually.

THE NAME OF MOUNT TABOR SANITARIUM, at Portland, Oregon, has been changed to Crystal Springs Sanitarium. The medical directors are Dr. Robert L. Gillespie, President, formerly staff physician, Murray & Gillespie Hospital, Butte; St. Vincent Hospital, Portland Hospital and N. P. Sanitarium, Portland; Dr. Walter T. Williamson, Secretary, late first assistant physician, Oregon State Insane Hospital, Prof. nervous and mental diseases, Willamette University; Dr. Henry Waldo Coe, Treasurer, founder of Crystal Springs; Dr. William House, Resident Physician, late Erie County Hospital, Manhattan State Hospital, and Lecturer University of Buffalo, New York.

Dr. Coe, it will be noted, still retains his efficient connection with this well-known sanitarium for the nervous of the Pacific states.

SENATOR COE.—Dr. Henry Waldo Coe, editor of the *Medical Sentinel* and distinguished neurologist, has been nominated for State Senator at his home in Portland, Oregon.

DR. A. E. MACDONALD retired from the superintendency of the Manhattan State Hospital, East, Ward's Island, New York City, October 1st, 1904, after which date and until further notice, all communication relating to the Hospital should be addressed to Dr. J. T. W. Rowe, acting superintendent.

Dr. Macdonald's personal address will be Columbia Court, 431 Riverside Avenue, corner of 115th street, New York City.

THE AMERICAN MEDICAL SOCIETY FOR THE STUDY OF ALCOHOL AND OTHER NARCOTICS was organized

June 8, 1904, by the union of the American Association for the Study of Inebriety and the Medical Temperance Association. The object of the union of the two societies is to create greater interest among physicians in the study of one of the greatest evils of modern times, promote more exact scientific study of the nature and effects of alcohol in health and disease, particularly of its etiological, physiological and therapeutic relations, and to secure more accurate investigations of the diseases associated with or resulting from the use of alcohol and narcotics.

THE FIFTEENTH INTERNATIONAL CONGRESS OF MEDICINE—LISBON, APRIL, 1906.—We have received the first number of the Journal of the Fifteenth International Congress of Medicine, that will take place in Lisbon on the 19th-26th of April, 1906. This number contains the statute of the Congress, the organization of the sections and of the national committees of the different nations. This congress will admit besides only scientific men presented by the National or Portuguese committees. 25 francs, 20 marks, one pound sterling or five dollars is the admission fee.

The work of the Congress is divided into 17 sections: 1, Anatomy (Descriptive and compared anatomy, anthropology, embryology, histology;) 2, Physiology; 3, General pathology, bacteriology and pathological anatomy; 4, Therapy and pharmacology; 5, Medicine; 6, Pediatrics; 7, Neurology, psychiatry and criminal anthropology; 8, Dermatology and syphiligraphy; 9, Surgery; 10, Medicine and surgery of the urinary organs; 11, Ophthalmology; 12, Laryngology, rhinology and stomatology; 13, Obstetrics and gynecology; 14, Hygiene and epidemiology; 15, Military medicine; 16, Legal medicine; 17, Colonial and naval medicine.

The executive committee of the Congress intends printing before the reunion, all the *official reports*; it is necessary that they shall be given before the 30th of September, 1905, to the general secretary. For the free communications it is necessary that they should be given before the 31st of December, 1905, if the authors want that the conclusions should be printed before the opening of the Congress.

The official language is the French. In the general assemblies, as in the sections, the English, German and French may be used. We see that the committee of the Congress has excluded the Portuguese from the languages permitted; this has only been done with the intention of diminishing the number of languages spoken; there can be no jealousy, when the legislator begins by sacrificing himself.

The president of the committee of the organization is the Doctor M. da Costa Alemão; the general secretary is the Doctor Miguel Bombarda; all the adhesions must be addressed to this doctor (Hospital de Rilhafolles, Lisbon).

THE CRIME OF COERCED INSOMNIA and its fatal consequences in railroad wrecks and destroyed and maimed lives and ruined hearts and homes throughout the land goes merrily on, as if a human life were of no more value to a railroad corporation than to a street car trust; and as if the human mental machinery were a perpetual motion contrivance designed by an all wise supervising engineer of human construction to run forever without stopping for repair for the exclusive benefit of an avaricious grasping, soulless monopolistic management of the minds and bodies of men, whose sole motive of living and being is dividends and profits; as if the brain of man could work on perpetually, any more than a locomotive without adequate and timely repair.

Lately it was an overtime worked switchman, robbed of adequate brain repairing sleep, reveals the amnesic neglect of tired neurones, in causing an open switch to be forgotten and its sequent crash of limbs and rolling stock and the crush of death. Again it is the misread time table or the wrong message read or sent by brain weary conductor or train dispatcher; now it is an imperiously sleepy brain-fagged engineer, kept seventeen hours on the mental strain of constant vigilant duty, who thought the train with which he soon collided had passed and with the crash that convinces him of his somnolent blunder, a hundred bereavements follow, in souls passed to eternity and irreparable

maimings. But the railroad superintendents and directors and the bond holders sleep the tranquil refreshing sleep of brain that daily gets the quantum of refreshing rebuilding sleep.

A more just regard for the powers of physiological endurance of brain and consequent mental capacity for steady unremitting work, of railway skilled employees would conduce even to the interests of corporate greed for dividends, as well as to the conservation of public life, and peace of mind and salvation of body and limb. We plead for similar concern and care for the steady and sure brain working power of railway operatives, to that bestowed on machinery and equipment, assuring the railroad management that such rational concern make for dividends and against casualty damages and for the public welfare and happiness. Railroad corporations should have neurological as well as legal advice.

It is better to prevent casualties by taking just care of the brain powers of railroad men than to pay surgeons for correcting and plaintiffs for consequences of accidents.

It would be well if railroad managers should heed the rest counsel derived from experience and a spell of nervous prostration from overstrain, by Sir William White, late naval constructor and President of the British Institute of Civil Engineers.

At the recent Engineers (St. Louis) Congress Sir William proclaimed his experience and his feelings against overwork, though for many years, and until he fell prostrate under the strain, he was proclaimed "the leader of the strenuous life" in his line of thought and work.

This great ship builder, prime mover and greatest in the reconstruction of the modern British navy, the reputed builder of more battle ships, cruisers, torpedo boats, torpedo boat destroyers than any man in his day, concludes that it does not pay to ruin health in overwork, at the expense of rest recreation of brain.

INEBRIATE BANKRUPTCY.—A financially well circumstanced saw mill owner in Arkansas is reported, while in a

state of mental depression following a protracted spree, to have filed a voluntary petition in bankruptcy. He listed his assets at \$18,000 and his liabilities at \$4,000 and a lawyer, who had been on the spree with him, drew up the petition.

Four days after, he and his lawyer sought to revoke the petition on the ground that the petition was an inebriate hallucination and the judge has taken the case under advisement. This man's bankruptcy was only in his brain. He had taken better care of his financial, than of his neurone resources.

If men who drink to profound intoxication all realized and acted wisely upon the fact that a profoundly alcoholized brain is not ordinarily normally reliable, for one or several days after drinking has ceased, there would be fewer suicides, homicides, financial and other miscarriages and misfortunes due to alcohol, on the calendar of casualty, calamity and crime.

THE HUMILIATION OF REGULAR MEDICINE BY GOVERNMENT LAWS.—An act regulating the practice of medicine in the Indian Territory, after providing that "no person shall practice medicine and surgery or either as a profession without first being registered as a physician and surgeon" etc. and exacting certain very good qualifications, and declaring that any person who shall prescribe or administer medicine for or who shall in any manner treat disease, wounds, fracture or other bodily injury for pay shall be deemed physicians and surgeons under this act and concludes with the final and further humiliating provision "that osteopath, massage, Christian Science and herbal treatment shall not be affected by this act."

If medicine qualified can have no more influence upon legislation than to prescribe rigid laws for its own practitioners and only on condition that no restrictions be put upon quackery outside the ranks of regular medicine, the profession had better cease its efforts to protect the people from quackery and 'fake' systems of medicine. With a united harmonious medical profession and a medical man

in the President's Cabinet to advise on medical measures and sanitary laws we may hope for better things for legitimate medicine. Then the great medical profession will be an interest quite as strong as the 'isms' and 'pathies' and fads of the day to be placated by political legislators and the press.

THE PRESSURE FOR ROOM AT THE CITY INSANE ASYLUM forces the superintendent to make premature discharges of patients and as the result of such pressure an homicidally inclined inmate apparently recovered was recently discharged, only to relapse and meet his death while attempting to smother a sleeping lady in a house which he had entered without leave.

Thus does overcrowding of insane hospitals not only endanger the safety, comfort and chances of cure of inmates but of people outside.

JAPAN'S PHYSICIANS.—Japan is said to have the largest number of physicians from the fewest schools of any nation on earth, and we also learn that they are the best equipped medical men in the world.—*K. C. Med. Rec.*

St. Louis lately had a welcome visit from President Kitasato of Imperial University of Tokio.

MEDICO-LEGAL.—During the coming year we will present four articles from the fluent, forceful and accurate pen of Dr. Jas. G. Kiernan where the issues in each record have been passed upon by the courts. They will be equally as interesting as those previously published to the medical men and members of the bar who so generally read the *Alienist and Neurologist*.

HEINRICH HEINE'S HOMEOPATHIC JOKE.—*The Medical Record* acquaints us from Ughette's work, "Physicians and Clients" with the following:

Heine while travelling in the south of France, having been entrusted by a mutual friend in Lyons, with the conveyance of a large sausage to a homeopathic physician and

being very hungry on the way consumed, with his wife's assistance, a large part of the sausage.

On arriving home Heine sent his homeopathic friend the following note:

"Dear Doctor:—From your scientific investigations, we learn that the millionth part of a certain substance brings about the greatest results. I beg, therefore, your kind acceptance of the accompanying millionth part of a Lyons sausage, which our friend gave me to deliver to you. If homeopathy is a truth, then this little piece will have the same effect on you as the whole sausage.

Your HEINRICH HEINE."

THE FOURTH PAN-AMERICAN MEDICAL CONGRESS will be held at Panama from the 2nd to 6th of January, 1905.

Titles of papers to the section on Nervous and Mental Diseases should be at once sent to the Secretary of this section, Chas. H. Hughes, M. D., 3857 Olive St., St. Louis, Mo.

THE AMERICAN PUBLIC HEALTH ASSOCIATION meets at Havana, Cuba, January 9 to 13, 1905.

Secretary, Chas. D. Probst, Columbus, Ohio.

SELECTIONS.

NEUROTHERAPY.

THE DIETETIC TREATMENT OF DIABETES.—In severe cases if a test diet has shown that the patient excretes more carbohydrate than he takes in, we must proceed cautiously. The next step in such a case is to examine the urine carefully for oxybutyric acid and its allies. The easiest way of doing so is by the "perchloride of iron" test.

1. If the addition of a few drops of solution of perchloride of iron causes the urine to assume a dark, portwine color, any change of diet should be made very gradually, for such a patient is always in danger of coma, and the coma may apparently be precipitated by any sudden change in dietetic habits. The carbohydrates in the diet should therefore be reduced very slowly, and bicarbonate of soda should be administered at the same time in quantities of from one-half to one ounce daily. Proceeding thus one can often get the patient gradually on to the diet of pure proteid and fat described below. Not infrequently, however, one meets with difficulty. The sugar excretion may remain high, and the patient's weight and general condition may deteriorate, or coma may threaten. If things shape thus, it is best to abandon all attempts at a rigid diet, and to allow a definite quantity of carbohydrate in the form of bread and milk. For it must never be forgotten that in some of these severe or, as Dr. Pavy calls them, "composite" cases proteid is as harmful in the direction of increasing the amount of sugar in the blood as carbohydrates. Even when everything is going well it is not advisable, when one is dealing with this type of the disease, to give

more than 500 grammes of cooked meat a day, or its equivalent in other forms of nitrogenous food. In many such cases one must reluctantly abandon all attempts to keep the blood sugar-free, and be satisfied if the output of sugar does not rise above 100 grammes per day.

2. If the perchloride reaction is negative, one can proceed to a strict diet without much anxiety. Whether this should be done suddenly or gradually is a matter of choice. Provided the patient can spare the time it would seem better to proceed gradually. One should begin by eliminating from the diet sugar and all the grosser forms of carbohydrate, then the farinaceous foods, then bread, and finally even milk, each of these articles being replaced as it is withdrawn by a carbohydrate-free substitute. The final strict diet would be something as follows:

Breakfast: Bacon or buttered eggs or both, or some cold ham; casoid-meal bread with plenty of butter; coffee made with sugar-free milk and sweetened with saccharin.

About 11 a. m.: A glass of sugar-free milk and a diabetic biscuit or rusk.

Luncheon: Soup; any animal food, *e. g.*, a little cold meat or game or some fish; cheese; salad with plenty of oil; some starch-free bread; as a beverage, any natural wine or a little spirit and aerated water.

Afternoon: Tea with plenty of thick cream and a diabetic rusk or two, or biscuit, with plenty of butter.

Dinner: Any clear soup with the addition of some grated cheese; fish; any meat; green vegetables with melted butter; baked custard made of sugar-free milk and eggs; beverage as at luncheon.

At bedtime: A glass of sugar-free milk and a diabetic rusk or biscuit.

If such a diet suits the patient—and of course it admits of variation to meet individual tastes—and if the sugar excretion disappears, he should adhere to it as long as possible. After a few weeks one may test his powers of consuming carbohydrates cautiously by allowing a weighed quantity of bread, and it will often be found that a certain degree of assimilative power has returned. In

such a case one may allow a small quantity of bread (or its equivalent in some other starchy food) daily, the condition of the urine, however, being carefully watched. More commonly one finds that the failure of assimilative power is progressive, and that cases which begin in this group pass sooner or later into the other, in which even on this strict diet some sugar is excreted, though by careful treatment such a result can often be postponed for a considerable time.

Fatty Foods.—It might truly be said that the usefulness of any article of diet to a diabetic is in direct ratio to the amount of fat which it contains. For fat is the only nutritive constituent of food which cannot do a diabetic any harm; it never increases the output of sugar. It follows from this that a large part of one's duty to a diabetic patient consists in teaching him to eat as much fat as possible. The best forms of fatty food are bacon and butter (each of which contains about 80 per cent), cream (60 per cent), and salad or olive-oil (which are pure fat). Every diabetic should learn to consume at least a quarter of a pound of butter a day; his bread should be soaked in it, and it should be used as a sauce for green vegetables and fish. Cream may be taken in tea or coffee. If there is any difficulty in digesting enough fat—and many diabetics experience such difficulty--the administration of a little alcohol at meals will often improve matters.—*Hutchinson, London Practitioner.*

FATAL IODISM.—P. Ghiso of Buenos Ayres, illustrates in the *Semana Medica*, No. 20, 1903, the serious lesions that may be induced by indigestion of potassium iodid. The subject was an Italian woman of 39, who took .8 gm. of potassium iodid on a physician's prescription given on account of edema of the feet persisting for three months. After two doses of the mixture edema and blisters developed in the face and arms, and the eruption was evidently aggravated by two more doses the next day, after which the medicine was discontinued. The eruption however, continued a progressive fatal course with ulcerations, necrosis, de-

lirium and death in less than three weeks. The prescription called for 2 gm. potassium iodid in 200 gm. distilled water and 20 gm. syrup. She took only four spoonfuls, but the character of the eruption, its abrupt commencement, the general syndrome, the fever and the negative bacteriologic findings all confirmed the diagnosis of an idiosyncrasy to the iodid superposed on a kidney affection.

TINNITUS-AURIUM.—Can it be relieved? A. Schloss, M. D., in *Jour. A. M. A.*, Sept. 12, answers this question in the affirmative. He uses a Hopkins' Electric heater, allows the air to reach a temperature of from 200 to 300 degrees F., depending on the case, and uses it at a pressure of 5 or 6 lbs., for as long a time as the patient can stand it, not exceeding five minutes. The diameter of the opening of the ear piece is three-sixteenths inch, and the stream of air is directed as nearly as possible against the tympanum. Three treatments a week for eight weeks, no failures.

M. CURIE'S EXPERIMENTS WITH RADIUM EMANATIONS.—In a paper recently read before the Académie des Sciences, M. Curie brings out some of the physiological effects of radium. The emanation given off by radium causes the death of the smaller animals, when breathed by them. He used an apparatus in which the animal is placed in a confined space and is made to breathe air which is charged with the emanation. A large jar is filled to one-third with pumice stone soaked with potash. Above this is a support which confines the animal (a guinea-pig) in the upper part of the jar. Oxygen is introduced into the jar to keep up the animal's respiration, while the carbon dioxide which he gives off is absorbed by the potash. The radium emanation is sent into the jar by another tube at the beginning of the experiment. At the end of a certain time, varying from one hour to several hours, the respiration of the animal becomes short and abrupt; he rolls himself up in a ball with his hair standing on end. Then he falls into a profound torpor and his body becomes cold.

Before the animal finally succumbs, his respiration has fallen as low as 6 per minute. The effects of ozone are eliminated in this case, as it is transformed to oxygen by the potash.

An examination of the animal showed an intense pulmonary congestion. The composition of the blood was modified, especially as regards the white corpuscles, and their number is diminished. The tissues of the animal are found to be radio-active. When the body of the guinea-pig is placed on a photographic plate wrapped in black paper, it gives an image in which the hairs are very clearly defined. All the different tissues have a photographic action. The hair shows the greatest effect, and the skin but little. The heart, liver, and brain possess this property, and especially the lungs. This action may be due to two causes, according to M. Curie; either the induced radio-activity of the tissues or the presence of the emanation dissolved in the humors of the body. In the above experiments he shows that radium has a toxic action not only when applied to the exterior of the body, as he already observed, but when it is introduced into the interior of the body by respiration.—*Scientific American*.

INSOMNIA.—Gorton (*Medical Record*) calls attention to the hygienic treatment of these cases, which is so often neglected and which in many instances is of far more value than the medicinal. The hygienic treatment consists in the use of the various hydrotherapeutic measures, such as the warm full bath, the cold pack, sitz bath, footbath, the cold rub, the ingestion of hot drinks, and regulation of the mode of life. He states that in many cases the first requisite in treatment is change of environment; this in itself is often all that is necessary. Getting away from the stress of life, from business cares and worries, from the depressing influence of well-meaning but tactless relatives or friends, is often imperative, and this should be more generally insisted upon. However, a man feels that he is essential to his business and cannot leave it; a woman cannot leave her children; often the financial problem can-

not be surmounted, and so the matter drags along until a point is reached where something *must* be done, and sacrifices are made which could have been avoided had the situation been controlled by a firm hand from the outset.

The warm bath given just before retiring, followed immediately by a hot drink, is of great value. In the administration of the bath, the patient's face should be bathed with cold water, and the head above the eyes enveloped in a towel wrung out of cold water. This is an important and necessary point in technique which is usually neglected. It prevents cerebral congestion, and the sensation of vertigo which often follows the prolonged warm bath if given without the cold head compress. The patient should lie in the bath quietly from fifteen to twenty-five minutes, and the water should be kept at a temperature of 98°. After emerging from the bath, the patient must not be rubbed dry, for this has an exciting effect. The excess of water should be wiped away quickly, and the patient at once put into bed and given a glass of hot milk and the hypnotic selected. The milk or hot drink must be so hot that it can only be sipped.—*Modern Medicine*.

PHOSPHORUS IN PSYCHASTHENIA.—A. Martinet (*La Presse Médicale*, No. 93, p. 805, 1903) says that phosphorus is valuable in all forms of mental depression, not only those which are due to accidental and evanescent conditions, but those which are of long standing. The phosphorus is given in the form of a mixture composed of phosphoric acid 10 parts, acid sodium phosphate 20 parts, and distilled water 200 parts. Of this mixture the patient takes thirty drops well diluted, preferably after meals, the dose being gradually increased until 100 drops are reached, providing it causes no disturbance of the stomach. The persistent use of this medication is almost invariably followed by improvement. *Medicine*.

DESSICATED THYROID IN PARALYSIS AGITANS.—J. C. Castalvi, in the *Revista de Medicina y Cirujica Practicas*, calls attention to the resemblance which paralysis agitans

has to the ordinary toxic neuroses. Parkinson's disease is commonly accompanied by tremor just as many other intoxications are. There is an inconstancy in the pathological findings, and no exogenous intoxication has been identified as a cause of the disease. In two cases of paralysis agitans in which the thyroid was carefully examined, it was found markedly altered. In one there were extensive sclerotic changes, and in the other there was collocystic degeneration. The administration of thyriodin dessicated thyroid is found to give a marked improvement in paralysis agitans. The sweating is less noticeable, there is an improvement in the gait and increase in arterial tension, and a diminution of tremor.—*Medicine.*

THE WASHING-OUT PLAN.—The Good it Fails to Do, the Harm it Does.—In old times, 20 or 30 years ago, when nothing was known about the introduction of uric acid, when excessive uric acid was thought to be due to faulty metabolism, and when it was believed that all the uric acid that was swallowed was promptly converted into urea, there was little left for the physician to do but to wash out the excess of uric acid by copious libations of water, combined or not with some alkali; and this he has proceeded to do, more or less, ever since, in spite of the fact which has recently become obvious to not a few, that the plan often fails to do much good, and sometimes indeed does very much harm. Today, however, we know that the foundation of this pathology is untrustworthy, that all uric acid disease is practically due to swallowing it, and that the administration of large quantities of water does but little to clear it out, and thus fails in the object for which it is given. It has also become evident that those in the largest class of uric acid diseases, viz., those of the circulation due to excess of uric acid in the blood (collelmia,) it not only fails to do the good expected of it, but very often indeed does actually produce infinite harm, even death itself.

And, first, as to its failure to do good.—In my book, "Uric Acid," edition 6, page 194, I give notes on an in-

stance in which in a morning hour the excretion of urine was only 53 cc. per hour, and then a dose of opium taken without fluid ran it up in the next hour to 234 cc. Here there was obviously plenty of water in the blood, but it was unable to get out till the opium cleared the blood of uric acid, so freeing the renal capillaries and allowing the water to pass. Obviously then, the uric acid in the blood controlled and kept back the water; the water in the blood did not control the uric acid. If a pint of water had been administered that morning before the opium would it have increased the excretion of water? Probably hardly at all, there was a large amount of uric acid in the blood and it was obviously blocking the renal capillaries and keeping all the water in, and the water was scanty before the opium, not from want of fluid in the body and blood, but from blocking of capillaries by uric acid.

But there is one way in which excess of water may increase the excretion of uric acid, and that is by producing dyspepsia; for dyspepsia diminishes the digestion and absorption of food, and so diminishes the formation of urea and of acid products, and this produces increased alkalinity of the blood and so increased solution of uric acid, and, for a time, increased excretion of uric acid. Probably, at least, one portion of the dyspepsia, produced by the excess of water, is due to its diluting all the digestive fluids and rendering them less active solvents of the food substances submitted to their action. Thus, we may say, to complete this part of the subject that the uric acid in the blood controls the excretion of water, and that the addition of water to the blood does not control or increase the excretion of uric acid, but that to a certain extent, by diluting the digestive fluids and producing dyspepsia, the continued administration of excess of water does, to a small extent, increase the excretion of uric acid. It is now, however, quite unnecessary to give excess of water at all, for all uric acid disease is prevented by stopping the introduction of uric acid. A person who forms 10 grains of uric acid a day and swallows other 10 grains in his food, will have 20 grains of uric acid to deal with each day, and may suffer

more or less severely from uric acid disease; but, if he will take the trouble to shut out the unnecessary 10 grains which he swallows with his food, he will gradually draw clear from excessive uric acid; he will have to deal each day only with 10 grains of the substance, and he will cease to suffer from the severe diseases which its excess in the blood and tissues produces.

But the practice of washing out with excess of fluids, which is due to an antiquated physiology, is still carried on, and it is therefore necessary to show up the harm which it only too often does. In arthritis, due to uric acid, it produces dyspepsia; dyspepsia increases the solvent powers of the blood for uric acid, and so the uric acid is dissolved out of the joints, and collemia, anemia and debility may take the place of the arthritis. The patient is cured of one form of uric acid disease only to suffer, and perhaps, to suffer very severely, indeed, from another form which is, perhaps, worse than the original. That he may get clear of his gout, is true, but this may be replaced by anemia, high blood pressure, with all its intracranial results, with mental depression and other troubles, and the danger of cerebral hemorrhage, or, before long, he may find himself suffering also from Bright's disease, dilated heart and dropsy. But the worst effect of this washing-out plan is seen in the far more numerous diseases which uric acid produces, through its effects on the circulation, those diseases which I have called the collemic group, of which Bright's disease is the worst type. The worst possible thing to happen in all collemic diseases and that which makes the prognosis in Bright's disease almost absolutely hopeless, is heart failure, for Bright's disease may be defined as collemia producing defective circulation, the defective circulation being doubled, trebled and quadrupled by subsequent failure of the heart. Collemia itself means defective combustion, but that defective combustion is far more than doubled if the heart fails as well. Now, when the heart is fighting against capillaries obstructed by uric acid, when it has as much as it can do to keep up the circulation from day to day against these obstructed capillaries,

it is obvious that a comparatively small matter may turn the scale against it and lead to its dilatation and complete failure. Now, this is exactly what excess of fluid does—it produces, as we have seen, dyspepsia, and dyspepsia produces defective nutrition, defective nutrition not only throughout the body, but of the most important muscle of all, that of the heart; and then we must not forget that a pint of fluid weighs a pound and a quarter, and that each pint of fluid more in the blood is $1\frac{1}{4}$ pounds more for the heart to drive. In this way excess of fluid does infinite harm—it dilates the stomach and causes incurable dyspepsia, dyspepsia causes debility, and the fluid does also increase, to a very large extent, the work the heart has to do. No wonder the heart fails and dilates; no wonder it ultimately becomes like the bulged outer casing of a bicycle tire, absolutely beyond repair.

Now, in recent years, I have seen quite a number of cases, of which I could give notes, did space permit, who have gone through this treatment of washing out and have survived by accident as mere helpless wrecks, with hearts which have been stretched beyond endurance and which will never again be fit for good work, lives which are crippled and which must live, if they live at all, on mere suffering and as invalids. Some of these cases have told me that they were forced to drink pint after pint of water in spite of an absolute distaste and loathing for fluid, (see *Uric Acid*, ed. vi., p. 30), for in this case Nature says “no” with all the force at her command. They do not want water, as there is already excess of water in the blood and tissue fluids, but the patients are forced to drink and manage to get down several pints a day in spite of Nature’s protests and in excess of her requirements. Gradually, between dyspepsia on the one hand, and excess of fluid to drive and excessive obstruction of the capillaries on the other, the heart fails, and dilates, and gives up the struggle, and one day the patient takes to fainting severely, or becomes more or less dropsical, and the worst that can possibly be done for these patients has been accomplished.

Perhaps in the great and extensive employment of

water, in the present day of treatments for dilatation and failure of the heart, quite a large number of these cases are probably due to the absolutely unphysiological idea that uric acid can be washed out. It is nearer the truth to say that the patient can be washed out, and is not unfrequently washed out, but the uric acid remains, and, more insane of all, those people who go in for washing out do also introduce each day in the food quite as many grains of uric acid as they could hope to wash out, if the process did act as it is supposed to, by those who have trusted to their imagination and not looked to see what the physiology of the body really does.

If the pericardium is very strong and refuses to give way, then the excess of fluid produces very high blood pressure with headache, mental depression, epistaxis, perhaps cerebral hemorrhage, but in any case the treatment is both painful and dangerous and I have shown that it is useless and unnecessary.

The opposite side of the picture is, I think, to be seen in the enormous amount of good which can be accomplished in many cases of collemia and Bright's disease by cutting off all fluids, by putting the patient on a pint, or even half a pint of fluid in the twenty-four hours, or even an absolutely dry diet of bread and fruit, and small amount of fluid in the fresh fruit being all that is taken for days together. The way in which the heart will sometimes recover under these conditions, when not hopelessly damaged, and with the recovery of the heart the way in which the defective combustion which we call Bright's disease will gradually pass away, is an object lesson which many today should witness to show them how extremely silly and unphysiological is the opposite plan of treatment, the attempt to wash out the uric acid from the body in excess of fluid, when the uric acid, as a matter of fact, controls absolutely all output of fluid from the body, and the absolutely insane attempt to cure uric acid disease by sweeping it out with one hand, while pouring it in with the other. In this and all cases of uric acid disease there is no necessity to run such terrible risks, for the uric acid excretion can, in most

cases, be reduced to at least one half by cutting off introduction, and if this is done it may be unnecessary to do anything at all to increase its excretion. A somewhat low and dry diet of bread and fruit with, or without, a little alkali, will do easily and safely all that is required.—*Alexander Haig, M. A., M. D., Oxon, F.R. C. P., London, Physician to the Metropolitan Hospital and to the Royal Hospital for Children and Women, in the Canada Lancet.*

HYPODERMIC MEDICATION IN ITALY.—C. A. L. Reed, in the *Cincinnati Lancet-Clinic* of February 20, 1904, records that the hypodermic medication is used in Italy with great freedom and more success than in any other country.

CLINICAL NEUROLOGY.

THE MUSICAL EQUIVALENT OF EPILEPTIC SEIZURES.—In an editorial article in the *New York and Phil. Medical Jour.* for April 9, 1904, the writer considers that the phenomena of epilepsy present one of the most fascinating fields of clinical study on account of their variety, complexity, and often unexpected deviations from the typical, "classic" epileptic attack.

A number of authors have commented upon the unusual types of epileptic seizures, including phenomena so completely dissociated from the ordinary manifestations of epilepsy that they have been styled "the equivalents of an epileptic seizure." In a recent article Montagnini (*Gazzetta degli ospedali e delle cliniche*, Dec. 27, 1903) discusses the "musical equivalent of the epileptic fit," taking as illustration a case which he observed in the Insane Asylum for Women in Venice.

The musical equivalent was first observed in 1897, by De Sanctis (*Riv. quindic. di psichiatria*, 1897,) who found that an "attack of singing" could completely take the place of the typical seizure or could accompany the usual motor phenomena of the typical fit. In the same year Cristiani, of Lucca (*ibid.*, 1897,) reported an observation which tal-

lied with those of De Sanctis. In the case recently reported by Montagnini, a married woman aged forty-eight years, who was bedridden with epileptic insanity, would suddenly begin to sing. Her song was a succession of musical tones succeeding one another slowly and forming always the same melody, with occasional slight variations. The song ended suddenly, sometimes by a low murmuring or a series of low soft notes, and usually lasted about five or ten minutes. During the "attack," sensibility to pain was considerably diminished, and painful stimuli did not arrest the singing, unless they were very intense, when the song was taken up as soon as the stimulus was removed. No convulsive movements were noted during the attacks, but at times the patient was observed to grow pale, and once a general tremor accompanied the singing. Neither the temperature nor the pulse was affected.

The attacks came on suddenly, were not induced by external stimuli or by excitement, and occurred almost always at the same hours of the day (usually in the morning, occasionally in the evening,) and almost always when the typical attacks from which the patient had been suffering before were due. After the attacks, the woman did not show any excitement, but relapsed into her customary taciturn and apathetic state.

Montagnini considers this case as analogous to those reported by De Sanctis and by Cristiani; that is, he regards the singing as the musical equivalent of the epileptic fit, and the case as one in which epilepsy took the shape of attacks of singing. In support of this view he adduces the constant periodic recurrence, the unaltered form, the sudden beginning and ending of the song, the partial loss of consciousness of the patient during the singing, the altered sensibility to pain, and the general tremor sometimes accompanying the singing.

This case certainly presents unusual and interesting features, but it will take more than a few cases to decide whether singing occurring in attacks as described is an equivalent of epilepsy, or is merely the caprice of an insane person. There is no doubt, however, that our knowledge

of the phenomena of epilepsy is constantly extending, and that the Italian school (Lombroso, Jonnini, etc.,) to whom belongs the credit of establishing the principle as to the psychical or substituted motor equivalents of epilepsy, is gradually strengthening its position.—*Modern Medicine*.

DEGENERACY, according to Dr. D. R. Brower, (Illinois Medical Journal) evinces itself in the co-existence of ear, jaw, teeth and other marked bodily defects with grave mental and moral twists and effects. The ear being one of the unstable factors in evolution, was, as had been early pointed out by Morel, most markedly stigmatized by degeneracy. Paranoia, epilepsy, recurrent and periodic psychoses, moral and mental imbecilities, idiocy and allied states were among the most marked mental expressions of degeneracy. Degeneracy often appeared in congenital lack of balance, exhibited in more or less serious and permanent mental abortions or in erratic break-downs occurring from time to time. Hysteria was often an expression of degeneracy, characterized by the nerve instability of the other types. In the discussion by the Chicago Academy of Medicine, of Dr. Brower's remarks, Dr. A. E. Baldwin, expressed the opinion that most definitions of degeneracy were by no means clear and that standards were needed for comparison. Dr. E. S. Talbot, claimed that degeneracy was a biologic process of disintegration, the reverse of integration. The scope of degeneracy was often limited to certain signs which were its sole expression. These signs (stigmata as they were early called) might be the only expression of degeneracy. Their significance had to be determined by a careful examination of the organism in which they were found since stigmata might be merely defects produced by degeneracy or might indicate how deeply such degeneracy had penetrated. In proportion to the depths of degeneracy in the organism would the stigmata affect the earlier simpler or later complicated acquisitions. Of necessity when the organism was affected by degeneracy the abnormal element would take the line of least resistance as determined by the depth of degeneracy as well as the variability of the

structure concerned. The face had become a variable structure since its contest for existence with the brain has caused the jaws and face to assume what (for food and defense purposes) was a lower type although as regards to existing functions and the higher standpoint of environment, this type was the higher. As the face and jaws were continually being sacrificed for the benefit of the brain, this sacrifice must be considered as a degeneracy of a part for the benefit of a complex whole. This condition occurred under the law of economy of growth long ago pointed out by Aristotle and cleared from obscurity by Goethe.

Dr. A. C. Cotton was particularly interested in the subject from the standpoint of paediatric prognosis. He would like to know how that biology of the degenerate under five compared with that of the normal individual. Like Dr. Baldwin he had felt the necessity for clearer definitions than those usually given.

Dr. W. G. Stearns stated that norms, as his researches had shown, could be established only by comparison of individuals of the same race. Some later opponents of the doctrine of degeneracy were guilty of assuming that degeneracy of the morbid type necessarily implied a mental or moral twist. This was not the case. It very frequently implied merely a predisposition to morbid action either in the lower or higher nerve centers or in the functions or structure of some organs.

Dr. C. S. Hallberg called attention to the fact that degenerates with a mental twist often passed examinations, only revealing their twist when this was irritated by a seeming insult to their imagined dignity.

According to Dr. J. G. Kiernan degeneracy was a necessary and often salutary phase of embryonic evolution. Structures which appeared during embryonic life, useless to the future being, were swept away by degeneracy, for the benefit of the embryo as a whole. When through arrested development, the influence of degeneracy on the lower structures was checked, it attacked the higher structures. Degeneracy might equally be shown in a defective liver or kidney as in a defective brain. It did not as Morel pointed

out half a century ago, necessarily imply defective mentality and morality. Moreau had shown that degeneracy expressed itself in: First, absence of conception; second, retardation of conception; third, imperfect conception; fourth, incomplete products (monstrosities;) fifth, products whose mental, moral and physical constitution is imperfect; sixth, products specially exposed to nervous disorders; seventh, lymphatic products; eighth, products which die in infancy in a greater proportion than sound infants under like conditions; ninth, products which although they escape the stress of infancy are less adapted than others to resist disease and death.

Dr. G. F. Butler was of opinion that too much stress had been laid on the criminal side of degeneracy to the neglect of its physical side. Environment at the plastic periods of childhood and puberty might favorably influence the mental and moral aspects. As a rule, degeneracy expressed itself in a way to balance rather than in actual deficiency.

THE "PSYCHOLOGY" OF JANE CAKEBREAD.—(Robert Jones, M. D., Medical Superintendent, Claybury Asylum.) Dr. Riggs of St. Paul abstracts from the *Journal of Mental Science* the following apt illustration of the psychic decadence of and perversion of the higher neurones of the cortex due to alcoholic indulgence. It points a psychiatric moral and depicts a tale of pathologic woe, worthy of the heeding by all physicians. It is not an uncommon clinical picture of the sequence of drink.

The author discusses at length the history of the famous Jane Cakebread, an inebriate who obtained a remarkable notoriety in London during the last years of the reign of Victoria because of her peculiar character and her 280 convictions in the police courts. The Inebriates Act of 1898 was directly due to her case, and the later revision, the Inebriates Act of 1902, has made impossible the recurrence of such a pitiful career, for by it such unfortunates may be committed to reformatories, where they can receive proper care. Incidentally, the author notes with interest that of

the 428 persons so far provided for under this act 25% have been found mentally deficient and others definitely insane.

Her parents were of the small farmer class. The large family of children, with the exception of Jane, all seemed to be normal and respectable. With very little schooling, she became what she called a "single-handed parlor maid." While in service she was left a legacy of 100 pounds, and from that time her downward career began.

Admitted to Claybury Asylum in 1896, Jane, while nominally a servant, was in reality a vagrant who had not been self-supporting for at least 30 years. Examination showed her language to be vague and disconnected. She possessed delusions of grandeur, believing herself to be a "lady of high character," entitled to a fortune, a portion of which had been stolen from her. Her general appearance was striking, her physiognomy denoting in many ways character and will power and her manner was at times gracious and condescending. In spite of her irregular life she was in good physical condition save for incipient cataract. She was, however, extremely changeable, becoming at a moment's notice noisy, violent and threatening. While promising to behave, she possessed very little self-control, was abusive to the nurses and officials, and extremely difficult to manage.

As time went by she became more noisy, more flagrantly untruthful, less and less amenable to discipline, and more inordinately fond of notice. At the end of three years there was a total collapse, and she died of heart failure and dropsy, with cirrhosis of the liver and kidneys.

Post mortem showed the brain well convoluted, of good size and weight, with some wasting of the central convolutions. There were adhesions at the apex of the right lung and marked atheroma of the aortic arch. Heart, fatty, with hypertrophy of the left ventricle. The liver was distinctly "hob nailed," the substance being fatty and indurated. The same condition extended to the kidneys and spleen, and the abdomen and lower limbs were markedly dropsical.

In discussing the psychology of this woman's condition,

Dr. Jones refers to the manifestation of what he calls the "collective interests of the individual,"—vanity, self-complacency, self-esteem. Without pride, she desired admiration and approbation, and her exalted ideas of her own importance accorded well with her love of power. The happiness she derived from hearing her name called in the police court amply compensated for a night spent in a cell, and one of her greatest joys consisted in reading clippings or extracts about herself from the police news.

The writer looks upon her susceptibility to the opposite sex as a sort of esthetic interest springing mainly from vanity. She would put up her hair in curl-papers, decorate herself with bits of ribbon, lace, etc., to impress the doctors on their rounds. Like a child, her greatest pleasure was to "show off," this desire for prominence amounting to a disease, but she was wholly indifferent and indiscriminating as to the personality of her audience. It was accompanied by jealousy, distrust of the nurses, who she thought injured her, and by violent outbursts of anger when the praise for which she longed was not forthcoming. Believing herself a grand lady, she constituted herself a supervisor of the patients in the hospital, a conceit in which she was humored by the attendants.

Despite her high opinion of herself, Jane had no self-confidence. She depended almost entirely upon the opinions of others, and this was the cause of her lack of self-control, her fickleness and vacillation.

She was considered by many eminently religious, yet she lacked high ideals, honor, reverence and admiration for the good. Psychologically, Dr. Jones believes that this apparent religious sentiment was but the natural product of her egotism, coupled as this often is with intolerance and a spirit brooking no contradiction. With no moral standard, there was never even the least suspicion of sexual perversion, and no allusion to immoral conduct was ever heard from her. She was absolutely untruthful, but this was due to defective memory, a pathological condition induced by alcohol.

While lack of inhibition and mendacity are common in

alcoholics, Dr. Jones believes that her vanity, love of display and notoriety were characteristics deepened into abnormalities by her constant recourse to alcohol. In other words, characters of such predisposition as hers, once the taste for alcohol is acquired, become easy prey to inebriety and insanity. Jane Cakebread was no drunkard in the common acceptance of the term, but was a typical inebriate of the "periodic drinker" type, her desire for alcohol occurring intermittently. She drank then only in small quantities, but that little was poison to her. Inebriety depends not only upon inherited tendency, but upon personal idiosyncrasy, and Dr. Jones concludes, therefore, that the only safety for this class of persons lies in total abstinence.

FRACTURE OF THE BASE OF THE SKULL.—E. Fos-sataro finds that the diagnosis of these fractures is difficult, owing to the frequent absence of symptoms and pathognomonic signs. Protrusion of brain substance occurs only in the gravest cases. To state that there is a fracture of the base requires a careful study of the whole group of symptoms present. Traumatism of the temporal or parietal region, followed by abundant and prolonged hemorrhage from the ear of the same side, with preservation of hearing and sometimes accompanied by facial paralysis, will justify a supposition of a longitudinal fracture of the petrous portion of the temporal bone. A blow on the occipital region, followed by otorrhagia consisting of an abundant serous discharge and exceptionally of brain substance through the auditory canal, accompanied by deafness and paralysis of the facial nerve, should lead to the diagnosis of a perpendicular or oblique fracture of the petrous portion of the temporal.—*Annali di Medicina Navale in Kansas City Medical Record.*

SUIT OF AN OPERA SINGER AGAINST A PHYSICIAN.—It is reported that a well-known opera prima donna of Munich, Mme. Milka Ternina, has brought suit for 50,000 marks against her physician. She suffered severely from trigeminal neuralgia and, while under treatment for the same,

became partially paralyzed in the left side of the face. She was led to believe that the remedies employed for the neuralgia brought on the paralysis. Who can and will enlighten us as to the probable medication causing so dire a result?

RELATION OF NEUROTIC CASES TO ABDOMINAL SURGERY.—McMurtry of Louisville speaks only truisms in the following, concluding an excellent paper read before the St. Louis Medical Society in June, on secondary abdominal operation.

In this connection it may be well to mention that class of patients familiar to all doing extensive work in abdominal surgery, which may be designated the neurotic class. With persistent pelvic pain and dysmenorrhea they are usually introduced to surgical treatment with cervical dilation and uterine curettage. Again, they seek surgical treatment, and are pleased to have the appendages removed. Later they are apt to have hysterectomy. Always improved for a time by an operation, but never cured, they go their way. To operate in this class of neurotic patients, without demonstrable lesions, is a misapplication of surgery, and should not be done even for the so-called moral effect which, at best, is rarely more than a temporary impression.

MOSQUITOES AND MALARIA.—Dr. William S. Dodd, writing from Talas, Asia Minor, says that ten years ago that town, which is four thousand feet above the level of the sea, was entirely free from malaria. To-day that trouble is exceedingly common, although there are no most quitoes, neither has there been any upturning of the earth, even on a small scale. The soil forms only a thin covering over the rocks, except where there is no covering at all. The climate is painfully dry, and there are no trees except in irrigated gardens. He has made no examination for plasmodium, but the symptoms are typical, and the effect of quinine and arsenic on the disease leaves no doubt as to the correctness of the diagnosis.

NEUROPHYSIOLOGY.

THE INFLUENCE OF MILKING UPON THE QUANTITY AND QUALITY OF MILK.—M. Lepoutre, agricultural engineer and assistant to M. Roquet, professor of zootechny and animal physiology at the Agricultural Institute of Belgium, has just made a series of interesting and careful experiments at the laboratory of zootechny and hygiene of the said institute for the purpose of determining the influence exerted by milking upon the quantity of milk, upon its composition, and particularly upon the proportion of its fatty materials.

Although our knowledge as to the influence exerted by the nervous system upon the physiological tissues is very meager, the experimenter started from the innervation (nervous stimulation) of the glands in general (to the greater or less excitation of which corresponds a more or less abundant secretion,) in order to try to bring about an artificial excitation of the mammary innervation for the purpose of improving the lacteal secretion.

Broadly considered, the operation of milking is a rational massage that has the effect of drawing from the udder a quantity of milk much greater than that which is contained at the outset. It is admitted that the udder of a good cow may, before the operation, contain 3 quarts of milk already formed, while, if the animal is well treated, the udder may yield from 10 to 15 quarts. It follows, besides, from the experiments of M. Lepoutre, that milking exerts a great influence upon the proportion of the fatty materials contained in the fluid. This influence is due, according to the experimenter, to the peripheric excitation of the nerves of secretion, which in their turn, by reflex action, bring about a greater excitation of the glandular cells. If we consider the general case of milking from two teats at once, as usual, we find that the effect produced is not the same during the entire period of the milking. The milk extracted from the first two teats is generally richer in fat than that of the two milked in the last place, and this richness will be greater if we simultaneously milk the two teats of one side, than if we simultaneously milk one teat of one side and one of the other

and then the two remaining ones—in other words, if we do the milking diagonally instead of laterally. The phenomenon is singular, if not obscure. It seems, however, explainable by the fact that in diagonal milking the excitation extends to all of the nerves of the gland, while in lateral milking it extends only to the side on which the operation is performed, and is consequently stronger. At all events, the influence of milking upon the proportion of fat is shown by the following experiment of M. Lepoutre. The same cow was milked several times and simultaneously by two different persons, who at each operation changed sides. The milk of each side was collected separately. One of the persons performed the operation by exerting a simple alternating pressure upon the teat, while the other performed a downward massage at the same time. The milk collected by the latter person was always markedly richer in fatty matter than that collected by the former. The difference was considerable, since in the first case there was 55 per cent of the total yield, and in the second 45 per cent. The method of milking has therefore a great influence upon the quality of the milk, and this influence is not explainable unless we grant that it bears some relation to the excitation produced.

On the other hand, the milk obtained at the beginning of the operation is not so rich as that obtained at the end. Up to the present, this fact has been explained by the statement that a prolonged operation ends by detaching from the lactiferous vessels the particles of butter adhering to the walls. M. Lepoutre is not of this opinion, and remarks that the operation is performed more vigorously at the end than at the beginning. The excitation must therefore be stronger, and the reflex action be greater upon the mammary tissues, thus causing a lactiferous secretion richer in fat.

The experiments of Prof. Roquet's assistant tend to condemn all milking machines, especially those based upon the use of a centrifugal pump. Up to the present it has been thought that the superiority of hand milking is shown only by the quantity of milk obtained; but now it is necessary to add the superiority from the viewpoint of richness in fatty matters.

Although these facts would show machines to be useless which, it was thought, would some day solve the problem of mechanical milking, it is probable that more highly improved ones will eventually take their place. The principles upon which these new apparatus will be based will be those of the mechanical and intensive production of nervous excitation at present effected, unconsciously as it were, by manual treatment. It is not unlikely even, and it is the logical consequence of what has just been said, that the milking machine of the future, based upon such principles, will be able to perform the operation of milking better and obtain a greater quantity of milk, richer in fatty matters, in a more uniform and more scientific manner.—*Scientific American*.

DOES BODY MAKE BRAIN?—In a recent number of the Contemporary Review appears a forcible and suggestive paper on "Play as an Education," by Woods Hutchinson. His chief contention is that the progress of investigation in the field of psycho-physics continues more and more decidedly to indicate that the organization of the brain is bound up so closely with muscular activities that no educational scheme can be rightly based on a plan which does not take full cognizance of this fact. In the hydra the nervous organization consists simply of fibers which assist in securing food; there is no brain. In the starfish, the brain, if brain it can be called, is only a double ring of nerves about the mouth. As we ascend the scale of animal life we find similar rings about the nose and eye. The locus of these rings determines the capital of the body-state, and all the rest of the territory included in the area of the animal hastens to get a representation there. Such is the genesis of the brain. If these observations be sound, it may be inferred that the more complex and delicate the muscular life, the more complex and delicate will be the structure of the brain and the greater its intellectual power. This conclusion is supported by a study of the play of animals. The simplest organisms have no period of play. The frog has no play time. Birds have little. In this respect dogs and cats are their superiors in a degree commensurate with their superior intelligence.

While the child plays he is organizing his brain; it is growing; he is gaining the power which in after years will enable him successfully to cope with situations demanding a well-trained mind. The lesson which lurks in this conclusion for teachers and school authorities may be condensed into a phrase: Shorter hours of study, and public school playgrounds everywhere. The latter should be under school supervision and should be recognized as an integral factor in education, not merely tolerated as a necessary evil or regarded as a side-issue. Athletics should likewise be cordially recognized as an essential part and force in the curriculum.

RAMON Y CAJAL'S MORPHOLOGIC UNITS REAFFIRMED.—Lewellys F. Barker writes from Berlin to the Journal A. M. A. as follows:

"In view of the attacks made on the neurone doctrine by Nissl and Bethe in Germany, it was interesting to find that Ramón y Cajal not only holds firmly to the doctrine of morphologic units in the nervous system, but is as yet by no means prepared to admit the existence of organic continuity among these units; in other words, he supports the neurone doctrine as strongly as ever, and in addition, still believes in the "contact theory" which he originally suggested. His newer preparations lead him to assert more vigorously than ever the transference of impulses through a contact relation of the end feet of axones and collaterals to the cell bodies and dendrites of other neurones. And he has shown that the pericellular reticulum which Bethe described as a terminal nervous reticulum and declared to be so important as negating the conceptions of the neuronists, is not a reticulum of nerve fibers at all. It would seem almost the irony of fate that Bethe, who was asked some years ago to write an epitome of the newer neural conceptions and postponed doing so in order to avoid being premature, should have published his book on the neurofibrils on the eve of Ramón y Cajal's new discoveries. But Bethe may console himself with the fact that every new book dealing with fields in which research is active is now out of date when it is published, and besides Bethe,

by waiting and experimenting, has been able to present us with a wealth of new observations, for which every neurologist must be deeply thankful. Whatever may be the fate of the theories of the great Spanish investigator, this much is certain, that to him belongs the lion's share of positive contributions to morphologic knowledge of the nervous system in the closing decades of the nineteenth century."

SUBCORTICAL EXPRESSIVE REFLEXES.—Woodworth reports some experiments to demonstrate the fact that physical expressions denoting what are known to be the result of mental processes can also be the result of mechanical and chemical stimuli to centers outside the brain.

This was observed in the decerebrated cat, where such expressions as those depicting pain or anger were produced. The "ether-cry" was manifest in the decerebrated animals which shows quite clearly that such expressions as these do not require an organ of consciousness for their production, but are, after all, most often primarily subcortical reflexes.

[NOTE.—We have many examples of subcortical reflexes about us, but have grown accustomed to the vague term "subjective consciousness," which has not yet been wiped out, but the above data will furnish a much longed for limitation for the worn out term.]—*St. Louis Courier of Medicine*.

NEUROPATHOLOGY.

ARE DISEASE GERMS NORMALLY HARMLESS?—It is well known that many creatures or organisms that are dangerous or even fatal to man are harmless to him in their natural state, their carnivorous or parasitic mode of life being an abnormal one. The mosquito, for instance, lives upon vegetable juices in the absence of animals on whose blood it may feed. Birds whose normal food is grain may be made to like flesh food, and this liking might con-

ceivably lead them to a predatory existence. That something of this kind is true of the disease-producing bacteria is suggested by the hypothesis, according to which these are all non-parasitic in their origin and may exist harmlessly outside of animal tissues. This thesis, which appears to have originated with Pasteur, is upheld by Prof. E. Bodin, holder of the chair of bacteriology in the University of Rennes, France, who has just published a work on "The General Biology of Bacteria" (Paris, 1904.) Says M. H. Piéron, a reviewer, in the *Revue Scientifique*:

"This means that a virulent bacterium, producing a definite disease in the organisms infected by it, may live outside of these organisms on inert products and abandon its virulent parasitism; and that, inversely, an inoffensive species—that is to say, one that can not live in complex organisms—may be capable, out of contact with any living being, to acquire, by a series of successive transformations, an injurious character that would correspond to the appearance of a new disease.

"Thus disease would be really an accident, because the pathogenic power of bacteria would itself be an accident. We might conceive of a human life, up to its natural extinction, side by side with bacteria such as those of tetanus, septicemia, tuberculosis, and typhoid fever—bacteria at that time inoffensive, that is to say, saprophytes.

"Here we have certainly a dream, but the conception that regards all bacteria as ferments or agents of chemical transformation, useful at bottom, may have, rash as it is, some considerable measure of truth. In any case, it is seductive."—*Translation made for the Literary Digest.*

NEUROSURGERY.

PRECAUTION IN OPERATION FOR TRI-FACIAL NEURALGIA.—Robt. Abbe, of New York, advocates the interposition of a sheet of rubber tissue as a permanent barrier to the reunion of an intracranial nerve, divided in front of the Gasserian ganglion, and holds that it would in many

cases make unnecessary such severe operations as removal of the ganglion. He thinks operations on the ganglion have been overdone, and that resection of one-fourth to one-half inch of nerve anterior to the ganglion and within the cranium, and interposition of rubber tissue can be relied upon for a perfect cure up to six years at least. The probability of permanency he claims to be as great as in any other method. It is a simple, speedy and safe method, and therefore fulfills the highest aims of the best surgery. He reports a case of six years' standing with good results thus far.

See full account in "Annals of Surgery."

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

THE DOCTOR'S RECREATION SERIES. By Chas. Wells Moulton, general editor, arranged by Porter Davis, M. D., and issued by the Saalfeld Publishing Co. of Akron, Ohio, Chicago and New York.

The two volumes before us viz: The "Doctor's Leisure Hour" and the "Doctor's Red Lamp" are entertaining, restful reading. They will entertain both doctors of medicine and dentists and men of other professions, and laymen of none will find some fun in these pages at the expense of the doctors. The illustrations are unique, pleasing and good and the books are well published and on good paper.

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Volume number one contains 352 pages of pleasing recreation reading from such authors as S. Weir Mitchell, John Kendrick Bangs, Opie Reid, Jerome K. Jerome. Four illustrations.

Volume number two has an excellent list of stories by Conan Doyle, Joseph Kirkland, Ian Maclaren, Margaret Oliphant and others. The one which particularly interested us was "Doctor Santos," by Gustave Morales, in that the

doctor is placed in a very unusual position for a doctor, being given, on the death bed of a patient, a large sum of money to use as his conscience might dictate. The story is too long for the space at our disposal but it alone is worth the price of the book.

The volumes are entirely independent of each other, are finished in silk cloth, gilt edge top, and retail at \$2.50 per volume.

THE SURGICAL TREATMENT OF BRIGHT'S DISEASE.

By Geo. M. Edebohls, A. M., M. D., LL. D., Professor of the Diseases of Women in the New York Post Graduate Medical School and Hospital, Etc., New York. Frank F. Lisiecki, Publisher, 9-15 Murray St., New York, N. Y.

The essential of the Edebohls operation of renal decapsulation for Nephritis consists in invariably removing the kidney capsules, whether normal or pathological, loose or tight.

"Edebohls, April 22, 1899, details six cases of operation upon kidneys, the seat of chronic nephritis, in one of which, performed January 10, 1898, the operation was deliberately undertaken with a view to bringing about a cure of chronic nephritis diagnosed as such before the operation."

Having established his claim to priority in this procedure, the author describes the indications for its performance and gives a detailed history of seventy-two operations with the results and a conclusion in its favor, as "the main if not the only hope of sufferers from a hitherto incurable malady."

The author does not discuss that all important factor, the silent psychic suggestion of a surgical procedure suggestively undertaken and hopefully acquiesced in by the patient. Months and even years may be added to lives by timely and rightly suggested and performed surgery and escape from the after misdirected hopeless sort of treatment and management of these cases, especially in those recur-

rent forms dependent upon profound neuropathic depression, of which surgery may make inadequate estimate. The psychopathic and neuropathic factor need more consideration than are given them in surgical therapy or by the author, we think. With this view before us let us examine this statement in the author's conclusion:

"Of the entire number of seventy-two patients, thirteen received no benefit from operation, while fifty-nine experienced amelioration varying from slight or temporary improvement to complete cure. In nine cases the operation rescued the patient from immediately impending death."

Operations of this character, as a last resort after a full trial of the resources of neurotherapy, psychotherapy and general constitutional management, are well enough, but it is well not to expect too much of the operation alone, that is, independently of the exalting psychic impression, hopeful expectation and confident suggestion. As to the precise surgically remedial value of this decapsulating the kidney for chronic Bright's Disease we must, of course, withhold positive opinion and await the maturer conviction of larger observation and deductions from clinical experience.

RADIOTHERAPY AND PHOTOTHERAPY: RADIUM AND HIGH FREQUENCY CURRENTS. By Charles Warren Allen, M. D., Professor of Dermatology, etc., Post Graduate Medical School, New York, etc., etc., and assisted by Milton Franklin, M. D., and Samuel Stern, M. D., illustrated with 131 engravings and 27 plates and published by Lea Brothers and Co., Philadelphia, 1904.

The author in his preface truly says "the new therapy, based upon recent discoveries in the domain of radiant energy, has already achieved such positive results in some hitherto intractable maladies as to warrant us in considering it a powerful addition to our armamentarium. Naturally this has stimulated an immense amount of investigation and experiment, so that the reduction of this mass of knowledge to as usable form and the elimination of faulty observation have required the review of a vast quantity of

literature coming from all the quarters of the civilized globe." "In order to secure adequate data on which to base a judgment of the actual merits and relative values of the various methods of treatment by light and rays, the author and those aiding him have endeavored to ascertain the truth so far as possible, by actual work, before committing any statement to print."

This book is therefore, as an examination of its contents from cover to cover will confirm, a timely and valuable contribution to the practicable therapeutic reference books of the up-to-date practitioner of medicine, both neurological and surgical and should be on the ready reference shelf or table of every advanced physician who does things for the best welfare of his patients. It compasses well the subjects embraced in its comprehensive title.

SURGICAL ANATOMY OF THE HEAD AND NECK. By John B. Deaver, M. D., published by P. Blakistons Son and Co., 1012 Walnut St., Philadelphia, Pa. This book is made up from those sections of Dr. Deaver's complete work on surgical anatomy which treat especially of the regions which are of greatest interest to those practitioners who confine their work to diseases of the ear, eye, nose, mouth, throat and nervous system and provides this class of specialists with an absolutely unique book, useful, practical, new.

The illustrations, which were prepared to exemplify the text, have been drawn directly from dissections made for the purpose. They are accurate, artistic, realistic and are reproduced in accordance with the highest standards of typography.

The text is clear, succinct and systematically arranged. It sets forth the principles of anatomy as applied to medicine and surgery and describes with thoroughness the anatomic conditions fundamental to the various surgical operations.

The illustrations of brain sections are especially satisfactory for ready and accurate reference by the busy writer on cerebral pathology or surgery.

Dr. Deaver has done a good work and the publishers with their accustomed anticipations of the needs of the profession, have wisely placed this excellent book on the market at a moderate price. The brain and skull plates are especially valuable for ready reference by the alienist and neurologist and for surgery of this region.

THE MEDICAL BOOK NEWS. Beginning with the July, 1904, number, Blakiston's Son & Co., extended the sphere and influence of *The Medical Book News*, taking its place among the regular magazines as the mouth-piece of the medical profession in so far as the literature of that profession is concerned.

While retaining all its distinctive features, the journal will be published monthly, instead of bi-monthly, as heretofore.

A number of new departments are contemplated. Two of these—"Faculty Notes" and "Foreign Books"—commence in the July number.

Contributed articles of decided medico-literary interest and merit will appear regularly from the pens of writers of repute.

CLOUSTON ON MENTAL DISEASES. New (6th) Edition. Clinical Lectures on Mental Diseases. By Thomas S. Clouston, M. D., Lecturer on Mental Diseases in the University of Edinburgh. Thoroughly revised. Crown 8vo, 738 pages, with 29 full-page plates. Cloth, \$4.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1904.

We have pleasure in calling the attention of the many appreciative readers of the *Alienist and Neurologist* to the new (6th) edition of Clouston on Mental Diseases, etc. Concerning this valuable book on Psychiatry written on the field of practical clinical observations, the author justly observes: The scientific views regarding mental diseases have recently undergone great changes in regard to etiology, classification and pathology. Toxic and bacteriological causes of origin are in the air, and are put forward with

great force and confidence by some of the keenest workers among our younger men. The Italian school of brain pathology questions many things which we had before accounted settled generalizations. The tendency of the best of this modern work is to throw Psychiatry into closer relationship with General Pathology, and with the medical sciences as a whole, in their scientific aspects. There is a spirit of optimism now prevalent in regard to the possibilities of cure by direct means of such "incurable" diseases as General Paralysis and Epilepsy, which is new and most stimulating to us all. Such new views and new facts I [the author] have endeavored to notice in this edition, and the entire book I have largely re-illustrated by new Pathological plates. As in regard to previous editions, we cordially commend this revised and advanced edition.

SURGERY OF THE PROSTATE, PANCREAS, DIAPHRAGM, SPLEEN AND HYDROCEPHALUS. An historical review. By Benjamin Merrill Ricketts, Ph. B., M. D., Cincinnati. Is an exceedingly valuable epitome of reference and review to the practicing surgeon from a meritorious source of practical working experience, the author being well known to us as worthy of the position he holds in surgical practice and thought.

MEDICAL BOOKS, General Catalogue, P. Blakiston's Sons & Co., Philadelphia. Price 25 cents.

This is a hand reference manual of the latest and best medical publications.

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Upon the Management of Suppurative Cases of Appendicitis; Goiter—Diagnosis and Treatment; Peritonitis. By Charles C. Allison, M. D., Professor of Principles and

Practice of Surgery and Clinical Surgery, Creighton Medical College; Surgeon to St. Joseph's, the Wise Memorial and Douglas County Hospitals, Omaha, Neb.

Brain Injuries. By Walter T. Williamson, M. D., Portland, Oregon. Medical Director Crystal Springs, Mt. Tabor, Ore. (formerly Mt. Tabor Nervous Sanitarium); Professor of Nervous and Mental Diseases at Willamette University.

The Despoilers. By Edmund Mitchell, author of "The Temple of Death," "Towards the Eternal Snows," "Plotters of Paris," "The Lone Star Rush," "Only a Nigger," "The Belforts of Culben," "Chickabiddy Stories."

Treatment of Chorea. By Henry Waldo Coe, M. D., Portland, Oregon. Ex-President North Dakota State Medical Society; President Oregon State Medical Society; Medical Director Mt. Tabor Nervous Sanitarium, Etc.

Nicholas Steno. By Frank J. Lutz, M. D., Professor of Surgery in the Medical Department of the St. Louis University, St. Louis, Mo. Reprinted from Medical Library and Historical Journal, July, 1904.

Radium, Radioactive Substances and Aluminum, with Experimental Research of the Same. By Myron Metzbaum, B. S., M. D., Cleveland, O.

The Physiological Areas and Centres of the Cerebral Cortex of Man, with New Diagrammatic Schemes. By Charles K. Mills, M. D.

The Danger of the Use of Opium in Infancy. By T. D. Crothers, M. D., Superintendent Walnut Lodge Hospital, Hartford, Conn.

Radium. By Heber Robarts, M. D., M. E., St. Louis. Founder and formerly Editor American X-Ray Journal;

First President Roentgen Ray Society of America; Member Roentgen Ray Society of London; Late Surgeon to the Northern Pacific Railway, Etc.

Preliminary Treatment in Minor Gynecological Surgery. By William B. Small, M. D., Philadelphia, Chief Surgeon, Gynecological Dispensary, University of Pennsylvania.

A Foreign Body in the Meatus Acusticus Externus, Aggravating an Acute Tympano-Mastoiditis. By Emil Amberg, M. D., Detroit, Michigan.

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Table Wines. Are their Uses to be Encouraged? By Henry O. Marcy, A. M., M. D., LL. D., Boston.

Is the Journal of the American Medical Association a Partisan Organ? By G. Frank Lydston.

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The Technic of Vaccination. By Myron Metzenbaum, B. S., M. D., of Cleveland, Ohio.

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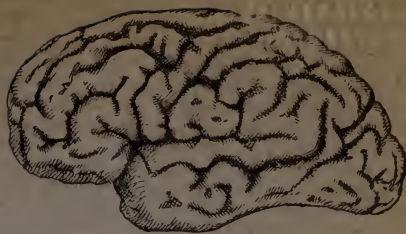
The Cranial Muscles as Determinants of the Cerebral Areas. By Philip H. Erbés.

Neurology in Philadelphia from 1874 to 1904. By Chas. K. Mills, M. D.

Report of the Massillon State Hospital for 1903.

Typical Tuberculosis. By John Aulde, M. D.

Walter Reed. A Memoir.



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